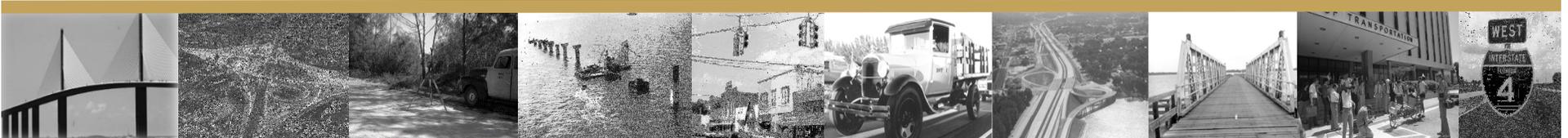


2015 Design Training Expo

Horizontal Geometry Tools in FDOTSS4

Vern Danforth

Tuesday, June 9, 2015 pm

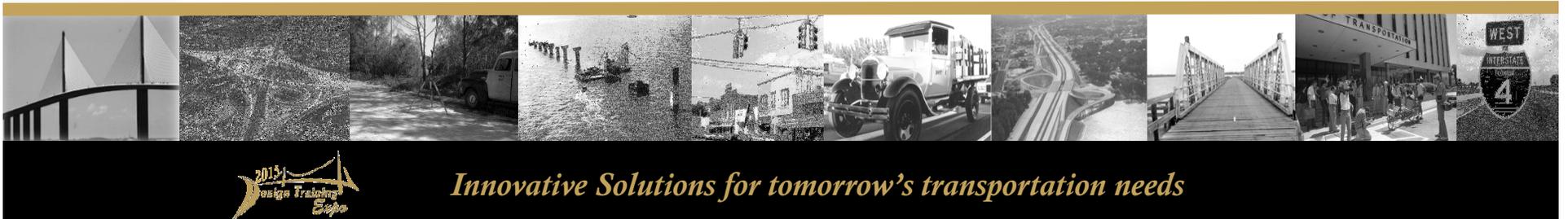


Innovative Solutions for tomorrow's transportation needs

Session Topics

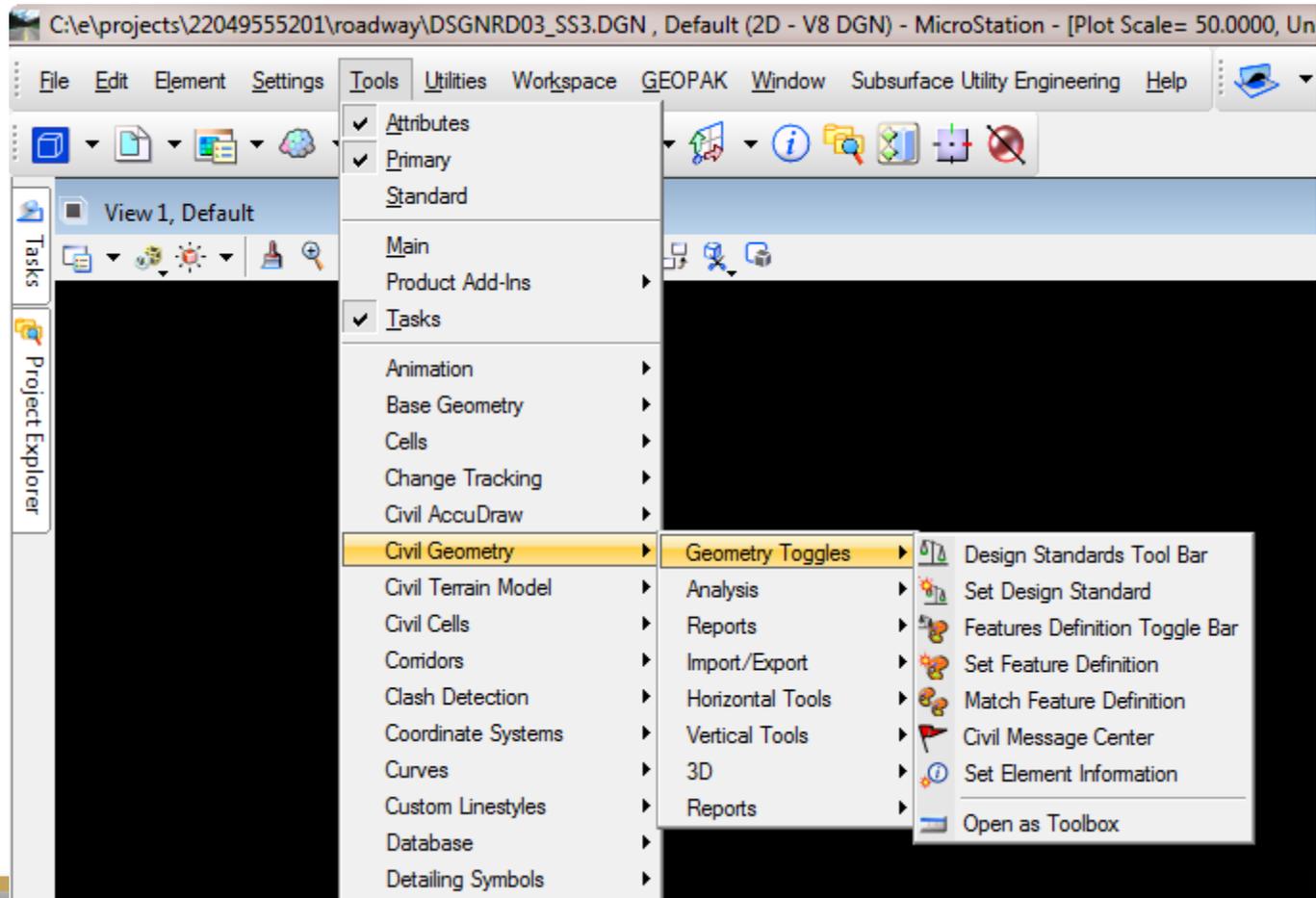
Bentley Civil SS4 Tools in FDOTSS4

- [Analysis and Reporting](#)
- [General Geometry](#)
- [Horizontal Geometry](#)
- [Civil Cells](#)



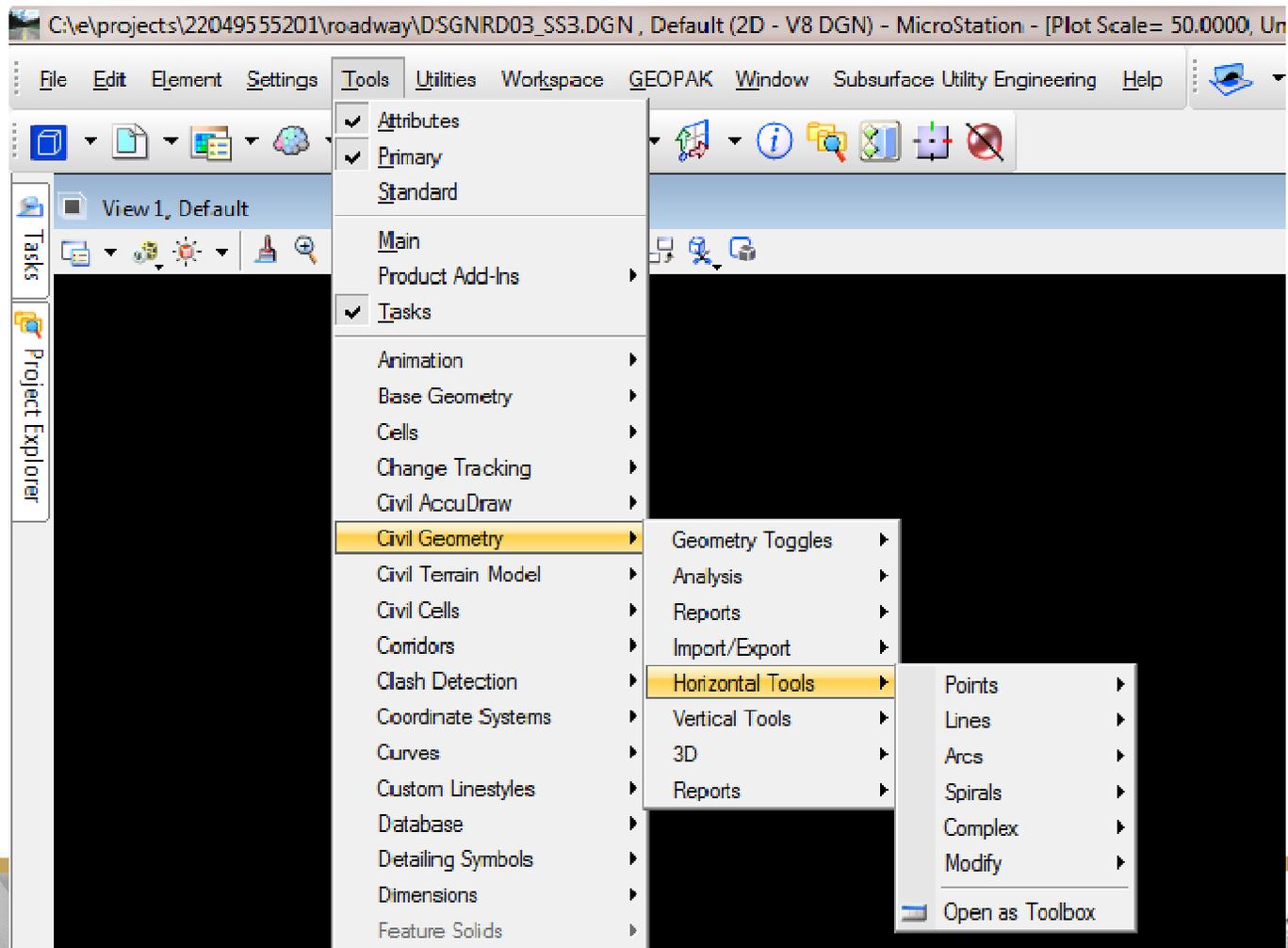
Innovative Solutions for tomorrow's transportation needs

Tools – Civil Geometry



Innovative Solutions for tomorrow's transportation needs

Tools – Civil Geometry



Innovative Solutions for tomorrow's transportation needs

Civil Tools – Analysis and Reporting:



◆ Horizontal Reports

- 1 Horizontal Geometry Report
- 2 Profile Report
- 3 Legal Report
- 4 Map Check Report
- 5 Station Offset Report
- 6 Station Base Report
- 7 Superelevation Report
- Open 'Reports' as Toolbox

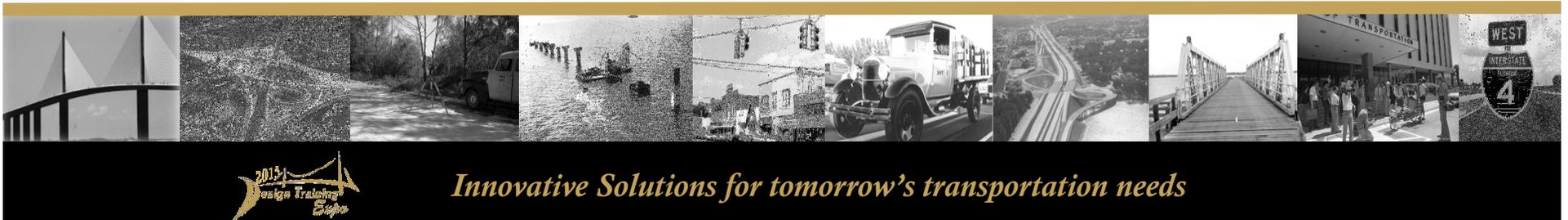
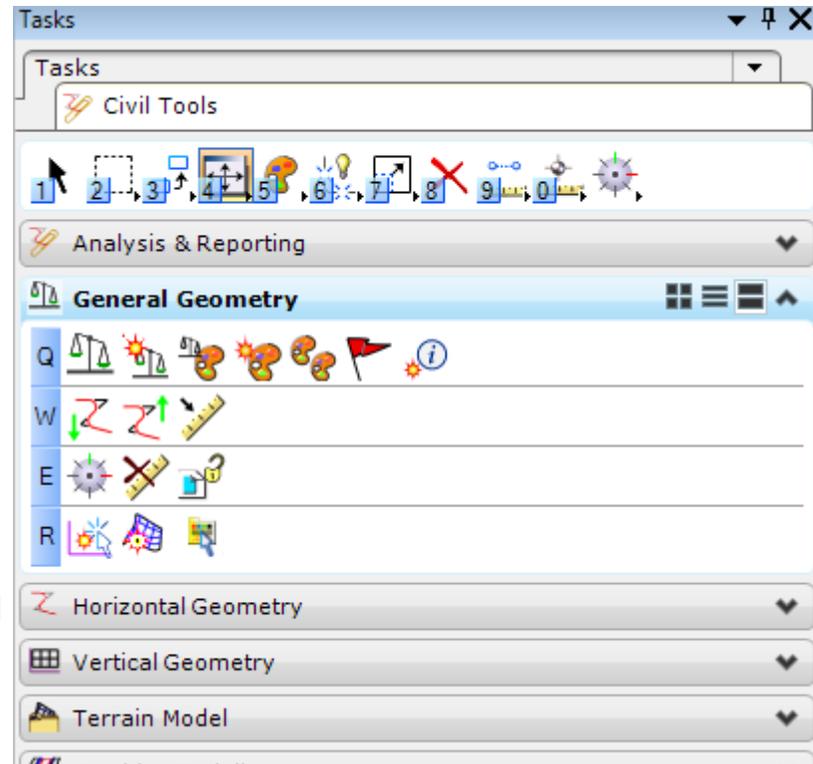
- 1 Analyze Volumes
- 2 Analyze Point
- 3 Analyze Between Points
- 4 Analyze Trace Slope
- 5 Analyze Pond
- Open 'Civil Analysis' as Toolbox



Innovative Solutions for tomorrow's transportation needs

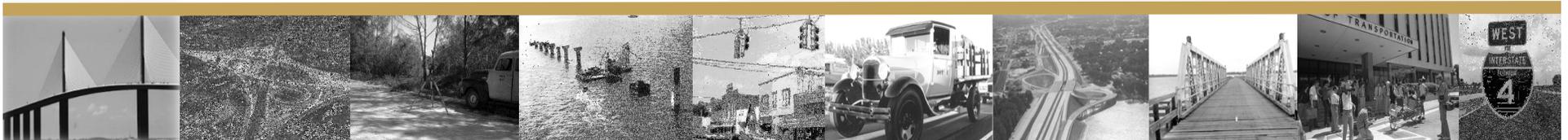
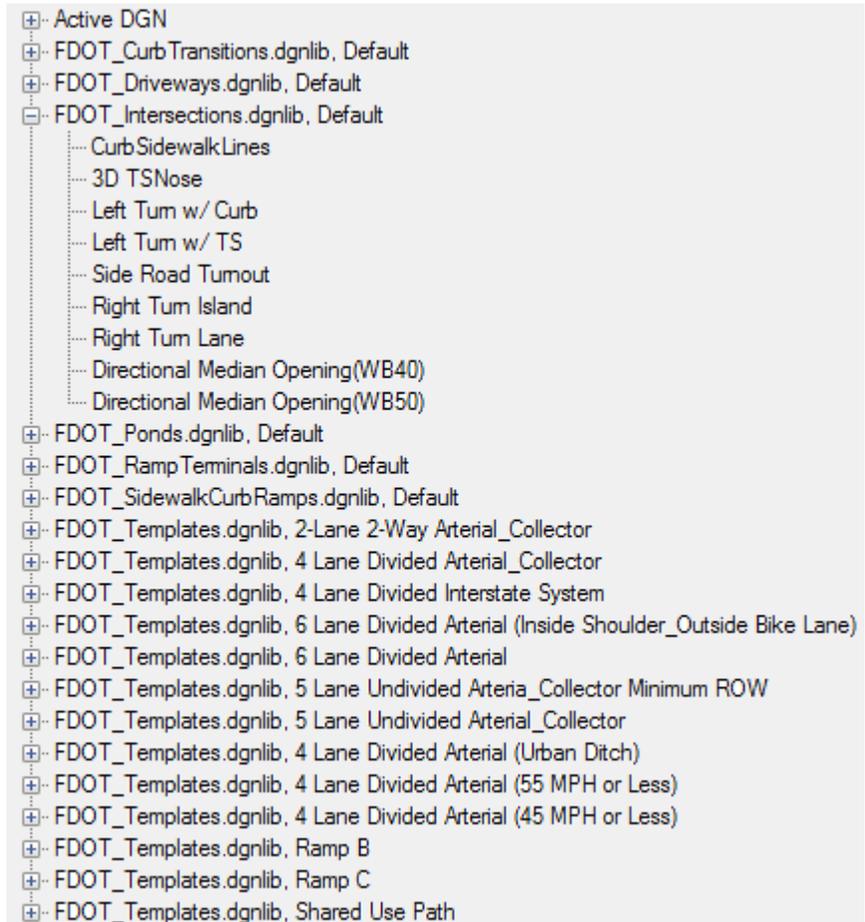
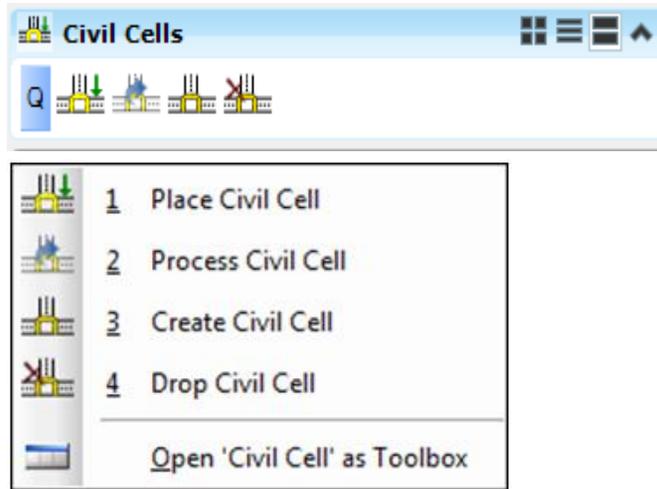
Civil Tools - General Geometry:

- Geometry Toggles
 - [Feature Definitions](#)
 - [Design Standards](#)
 - [Civil Message Center](#)
- [Import/Export](#)
- [Create Civil Rule](#)
- [Civil Accudraw](#)
- Set Active Profile/Terrain



Civil Tools – Civil Cells

- Place Civil Cells



Innovative Solutions for tomorrow's transportation needs

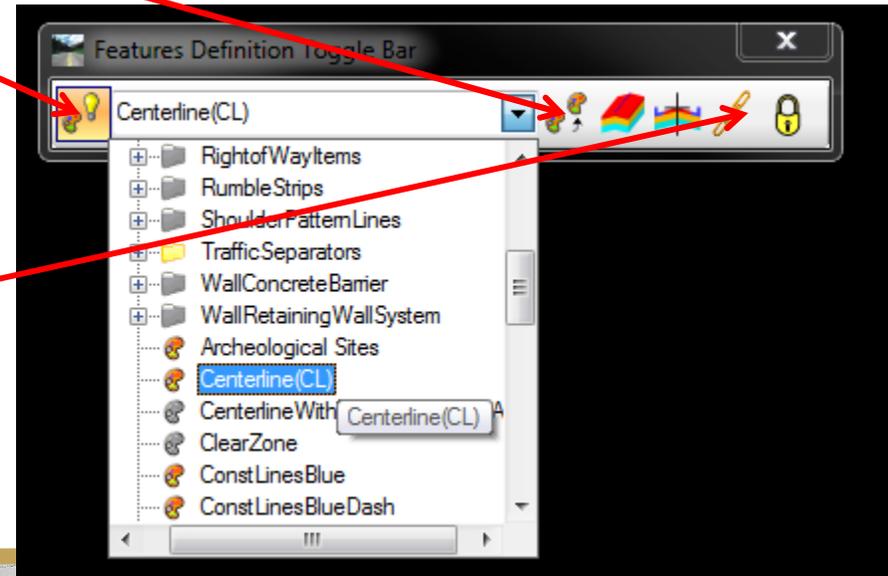
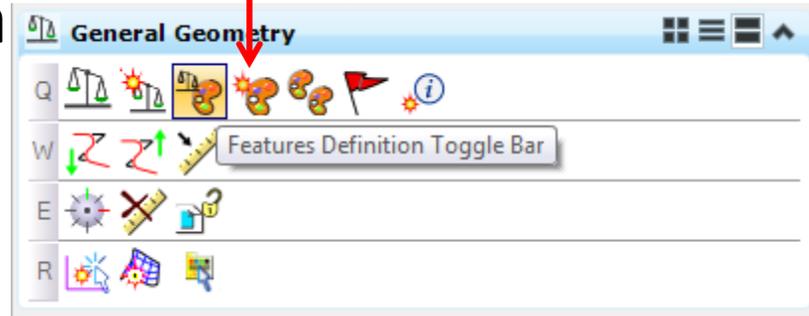
Geometry Toggles

Feature Definition Toggle Bar

- Match
- Use Active

- Chain Feature

Set Feature

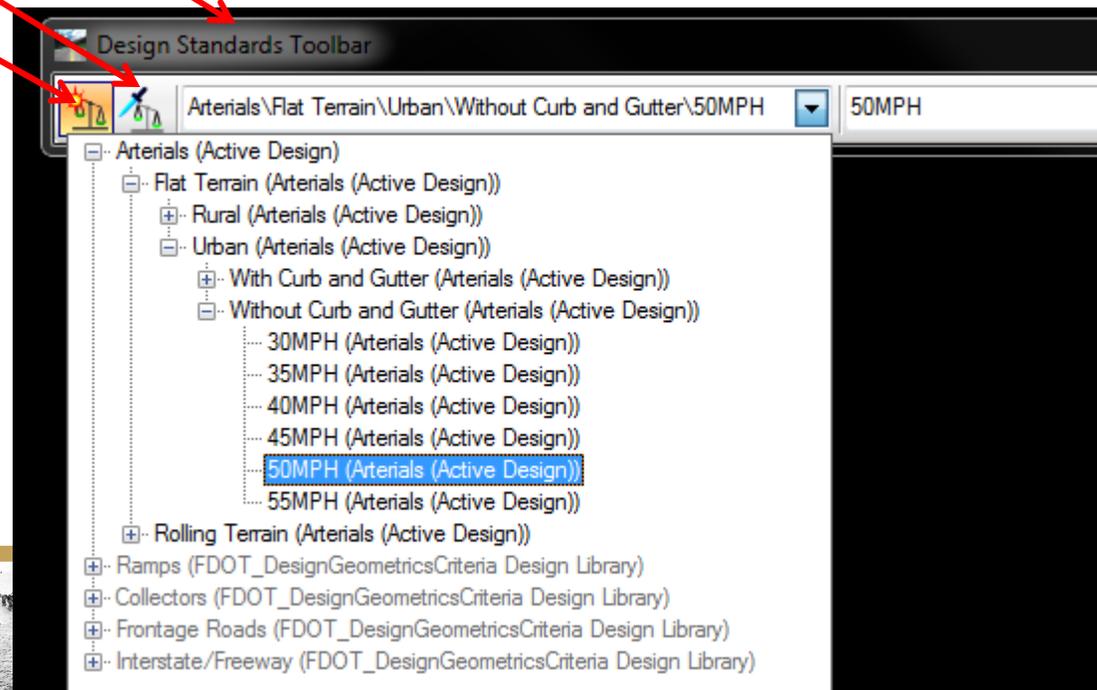
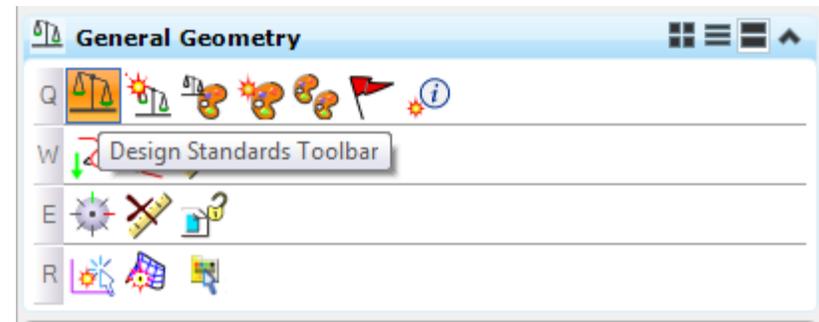


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Geometry Toggles

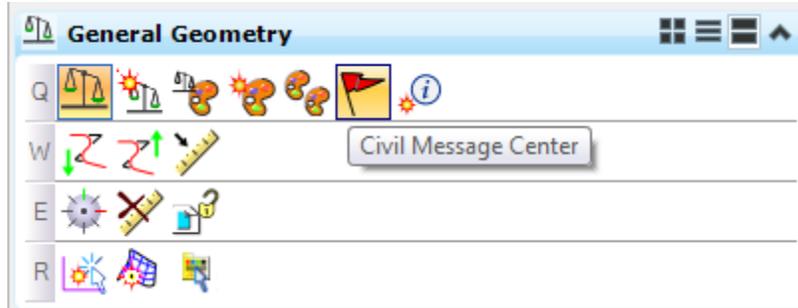
Design Standards

- Toolbar
- Match
- Set Active



Innovative Solutions for tomorrow's transportation needs

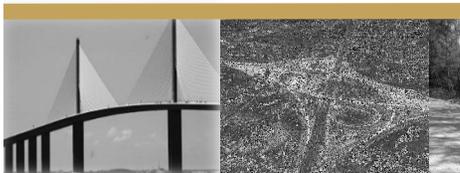
Civil Message Center



Civil Message Center

Hide All | 50 MicroStation | 1 Error | 1 Warning | 0 Messages

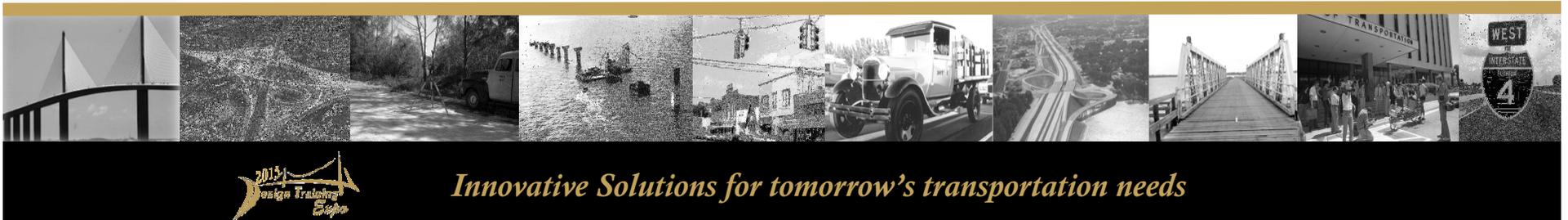
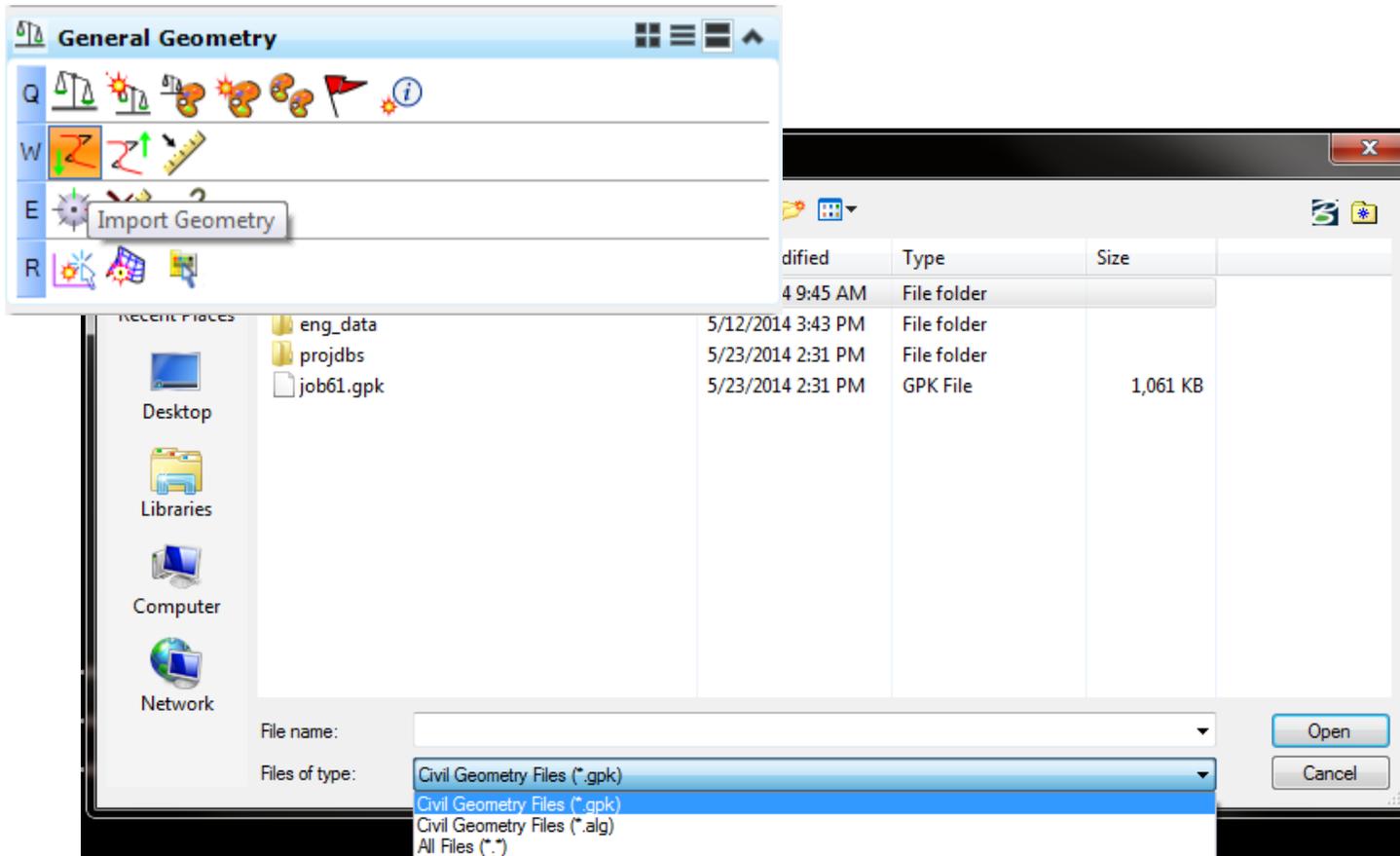
Element	Message	Description
Error	Arc radius is less than minimum	Design Standard Value = 286.000000 Actual Value = 110.000000
Warning	Zoom to	Design Standard Value = 400.000000 Actual Value = 172.787596
	Add To Selection	



Innovative Solutions for tomorrow's transportation needs

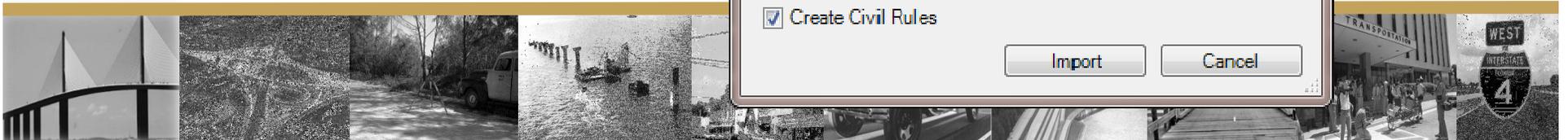
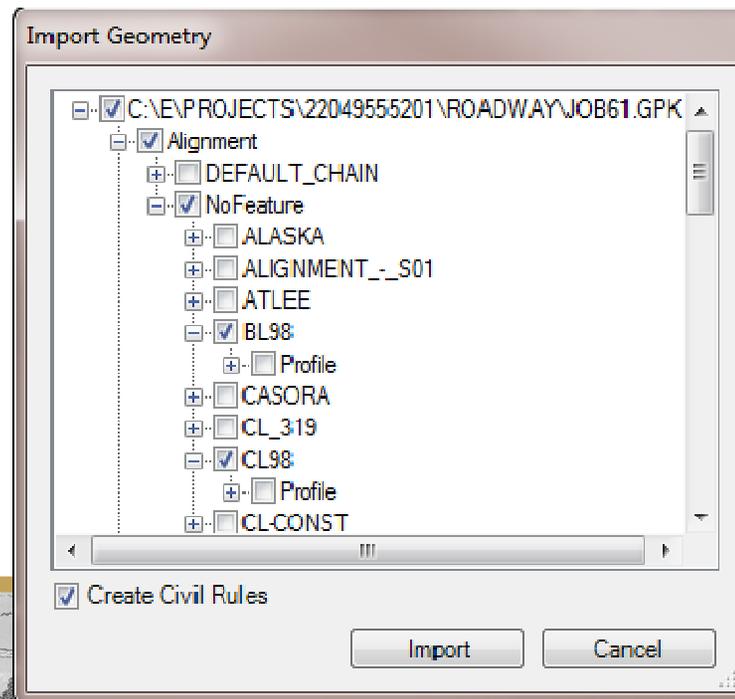
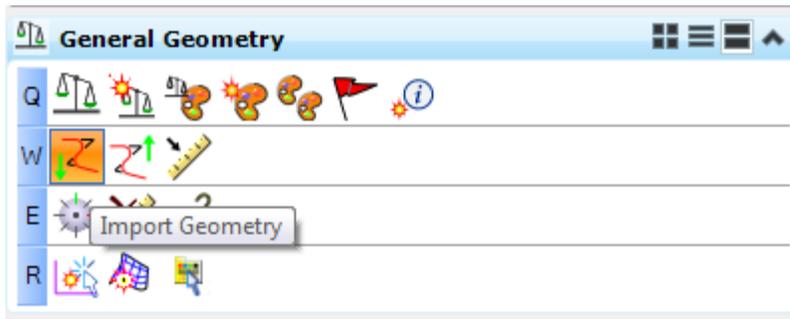


Import/Export



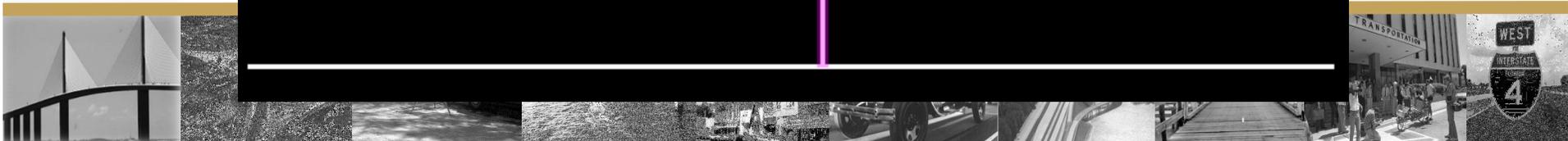
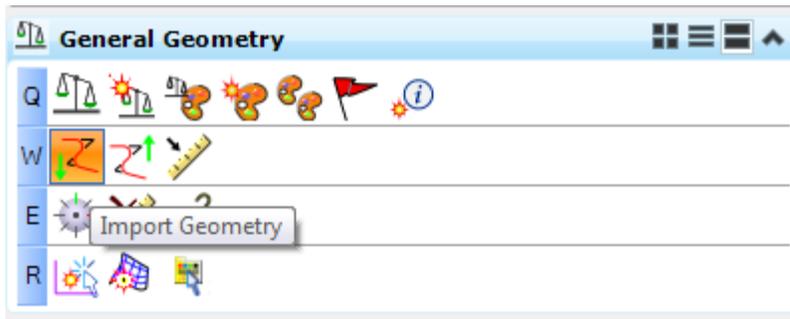
Innovative Solutions for tomorrow's transportation needs

Import/Export



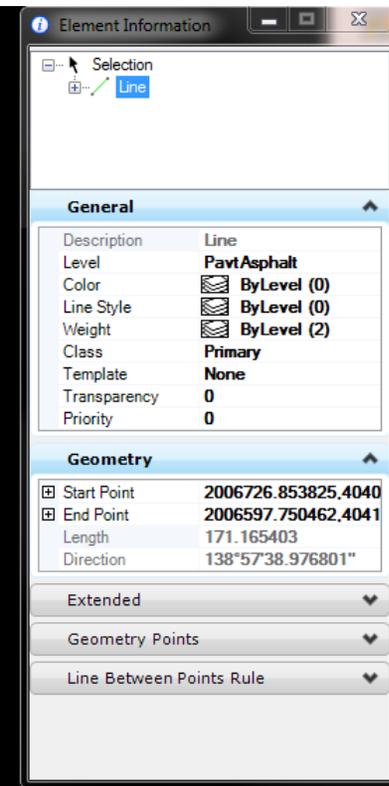
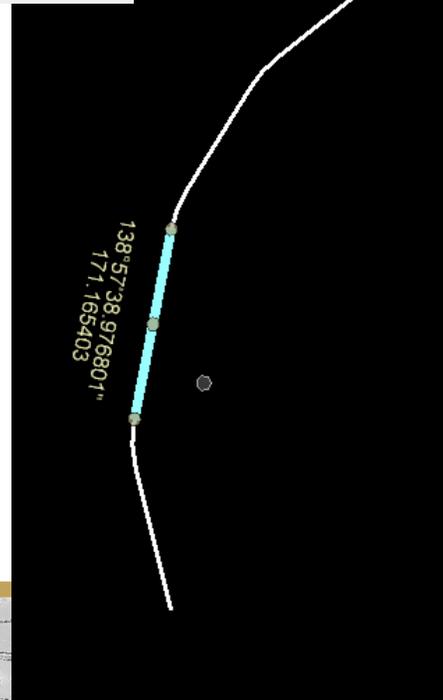
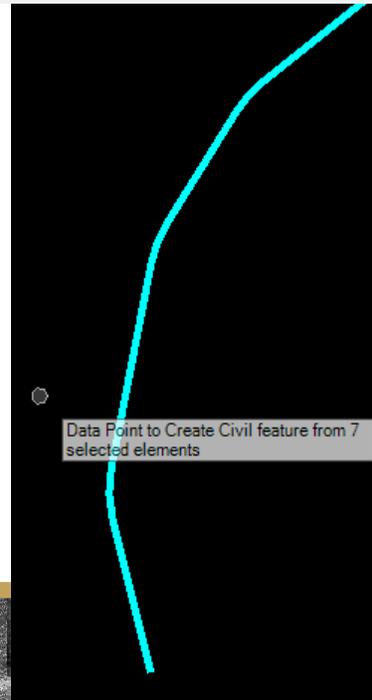
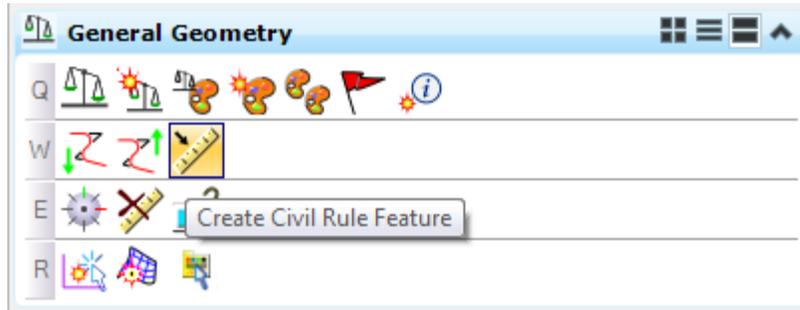
Innovative Solutions for tomorrow's transportation needs

Import/Export



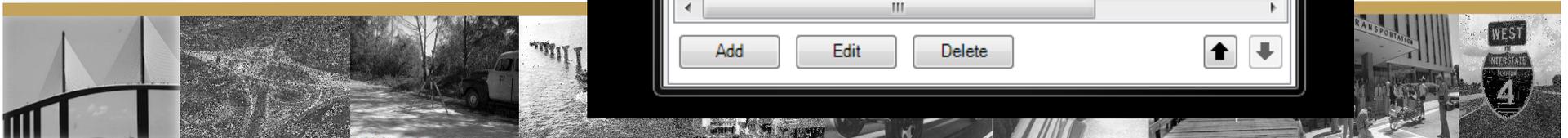
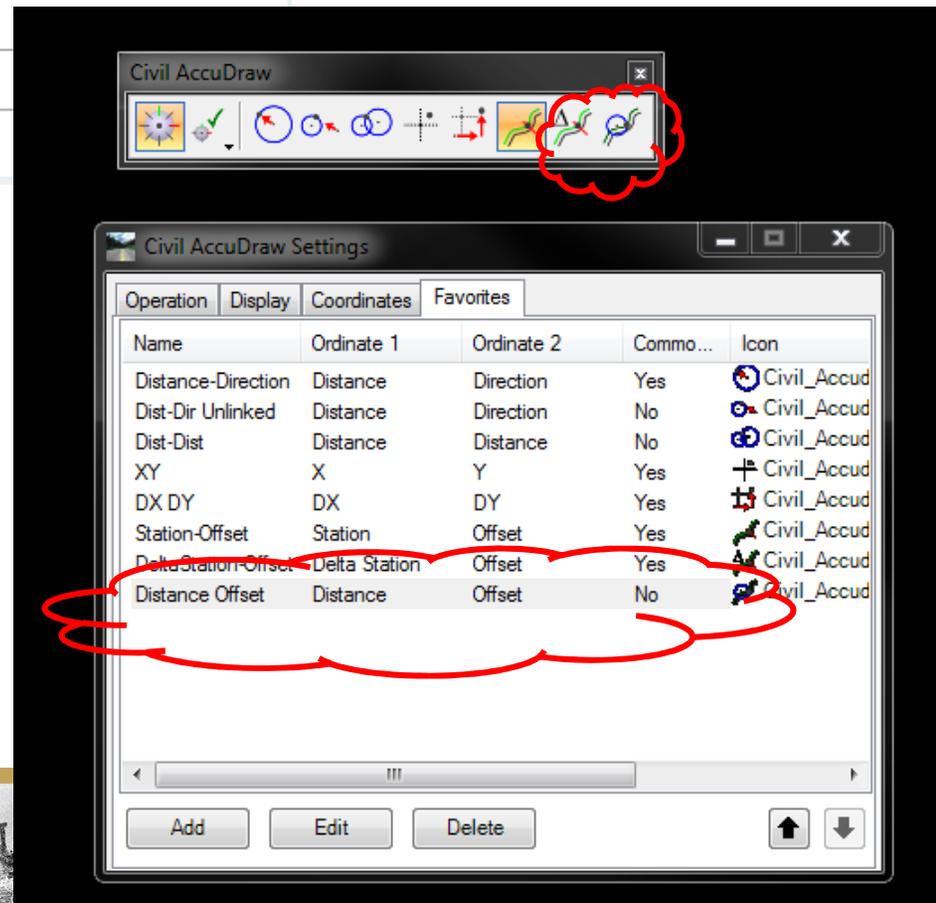
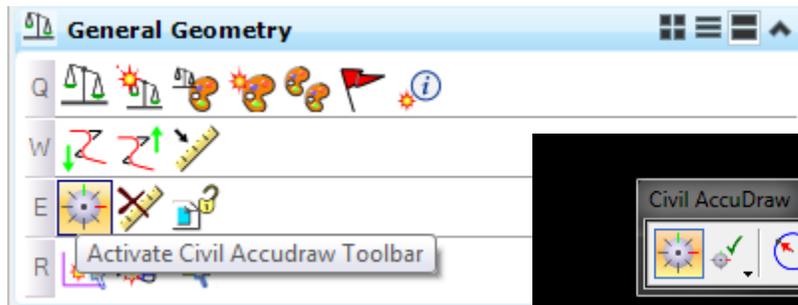
Innovative Solutions for tomorrow's transportation needs

Create Civil Rule



Innovative Solutions for tomorrow's transportation needs

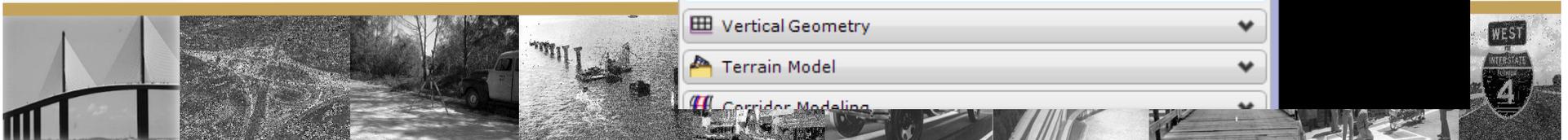
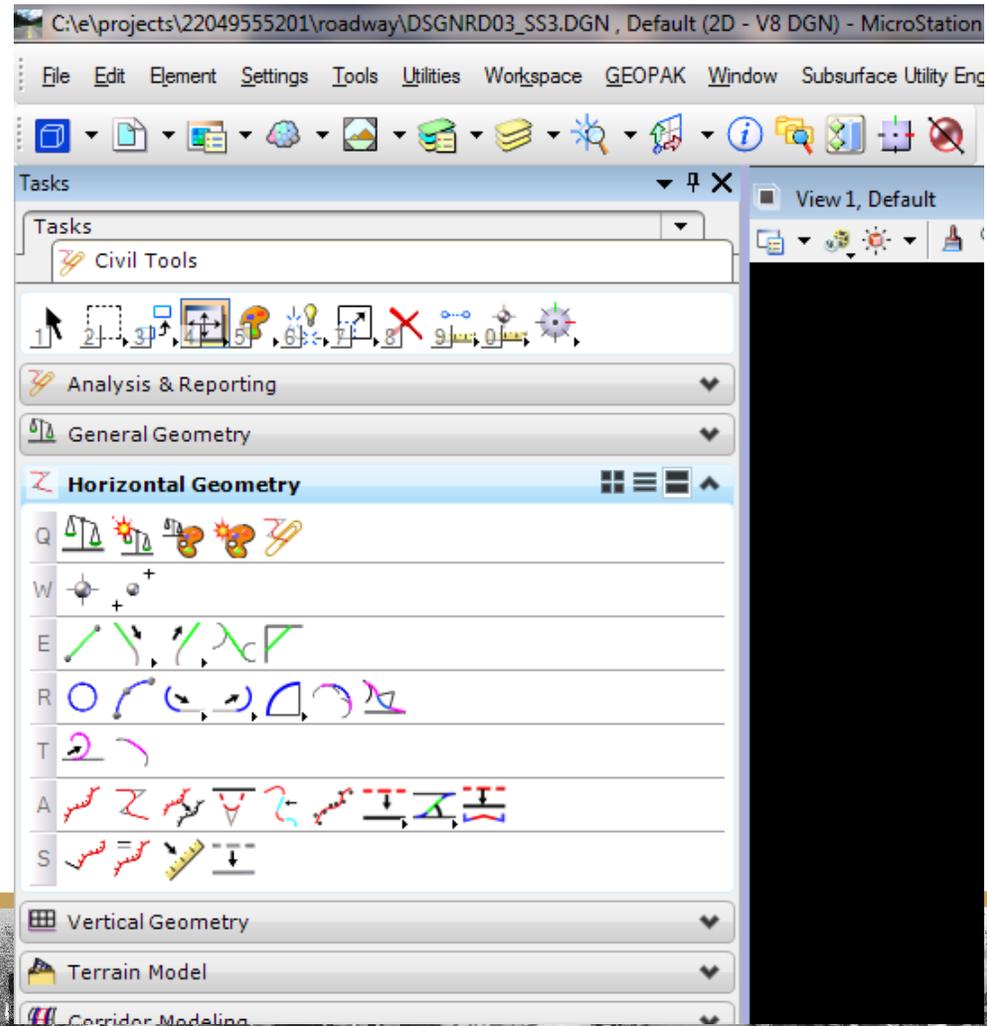
Civil Accudraw



Innovative Solutions for tomorrow's transportation needs

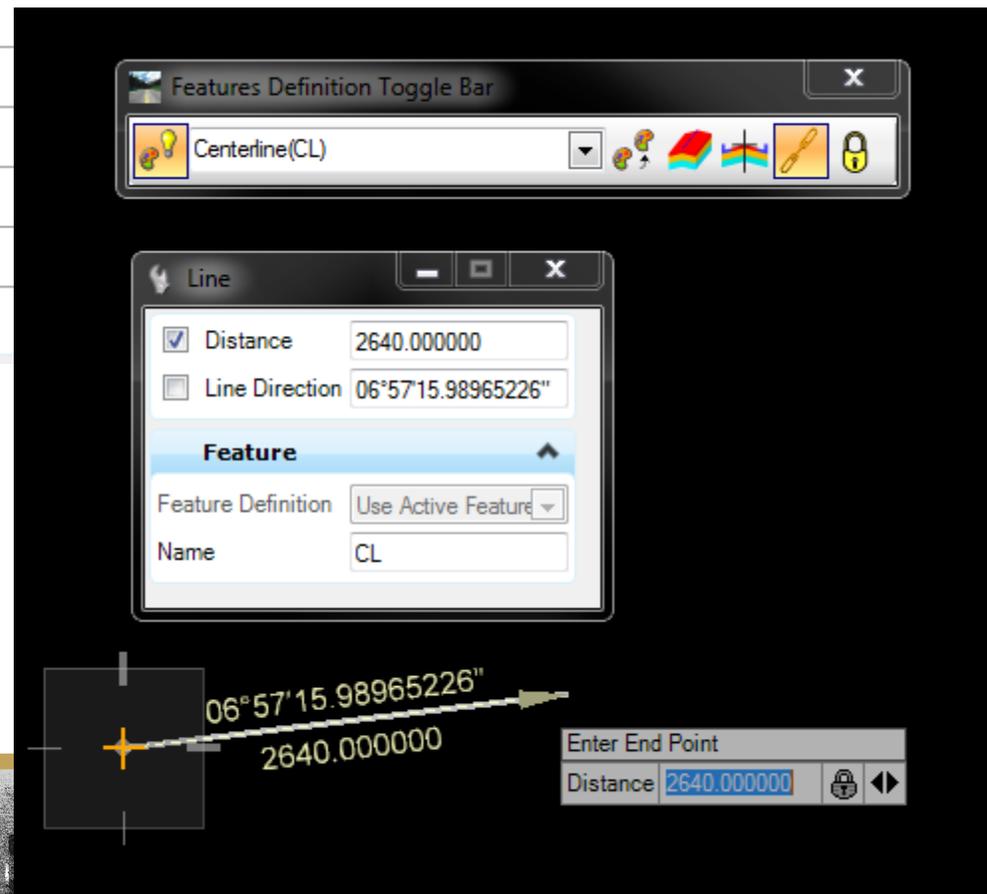
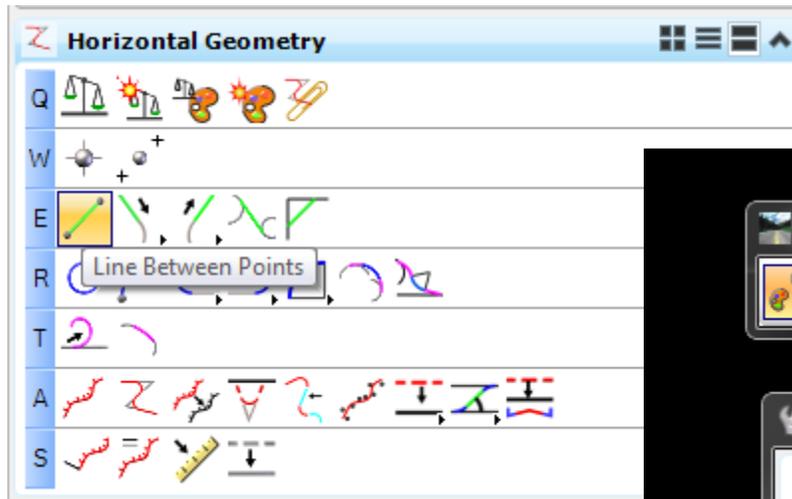
Civil Tools – Horizontal Geometry:

- [Points](#)
- [Lines; Simple, To, From](#)
- [Arcs Between Elements](#)
- [Offsets and Tapers](#)
- [Complex by Elements](#)
- [Modify Civil Elements](#)



Innovative Solutions for tomorrow's transportation needs

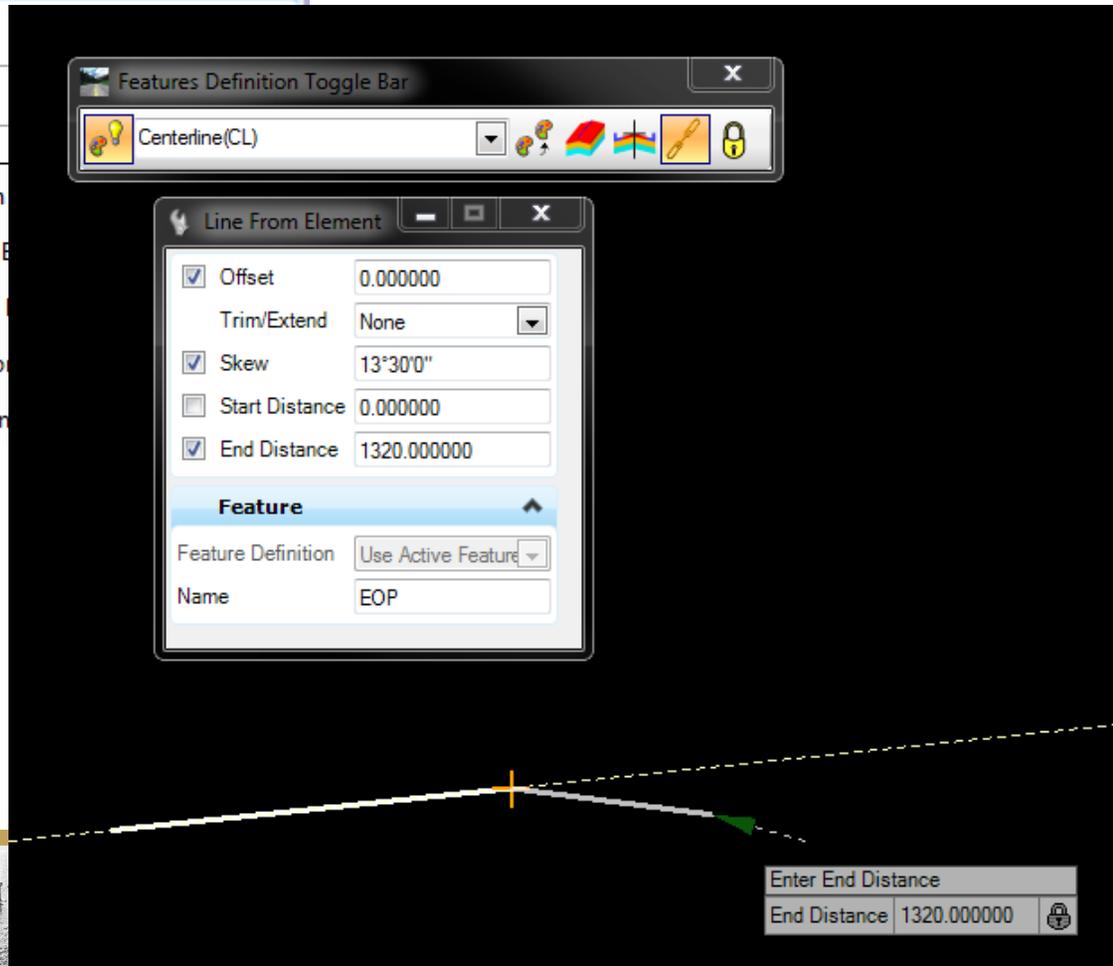
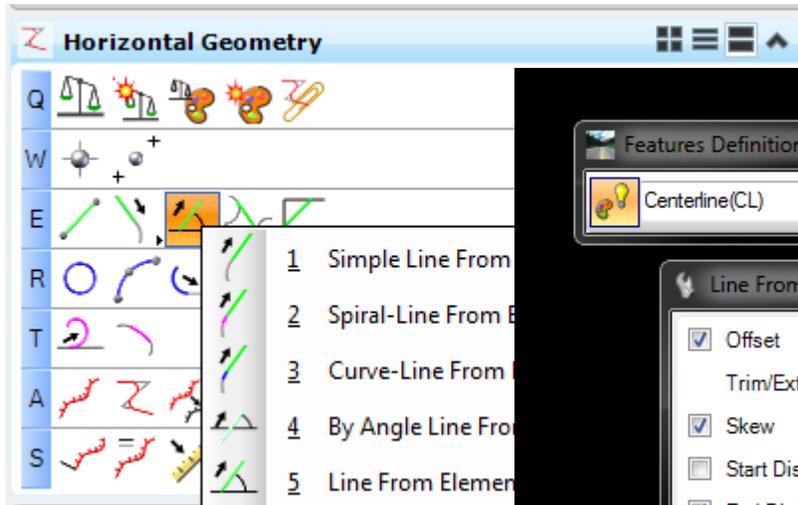
Lines; Simple, To, From



Innovative Solutions for tomorrow's transportation needs

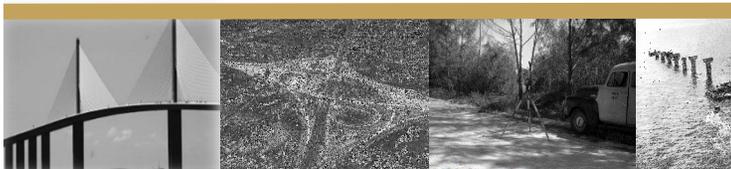
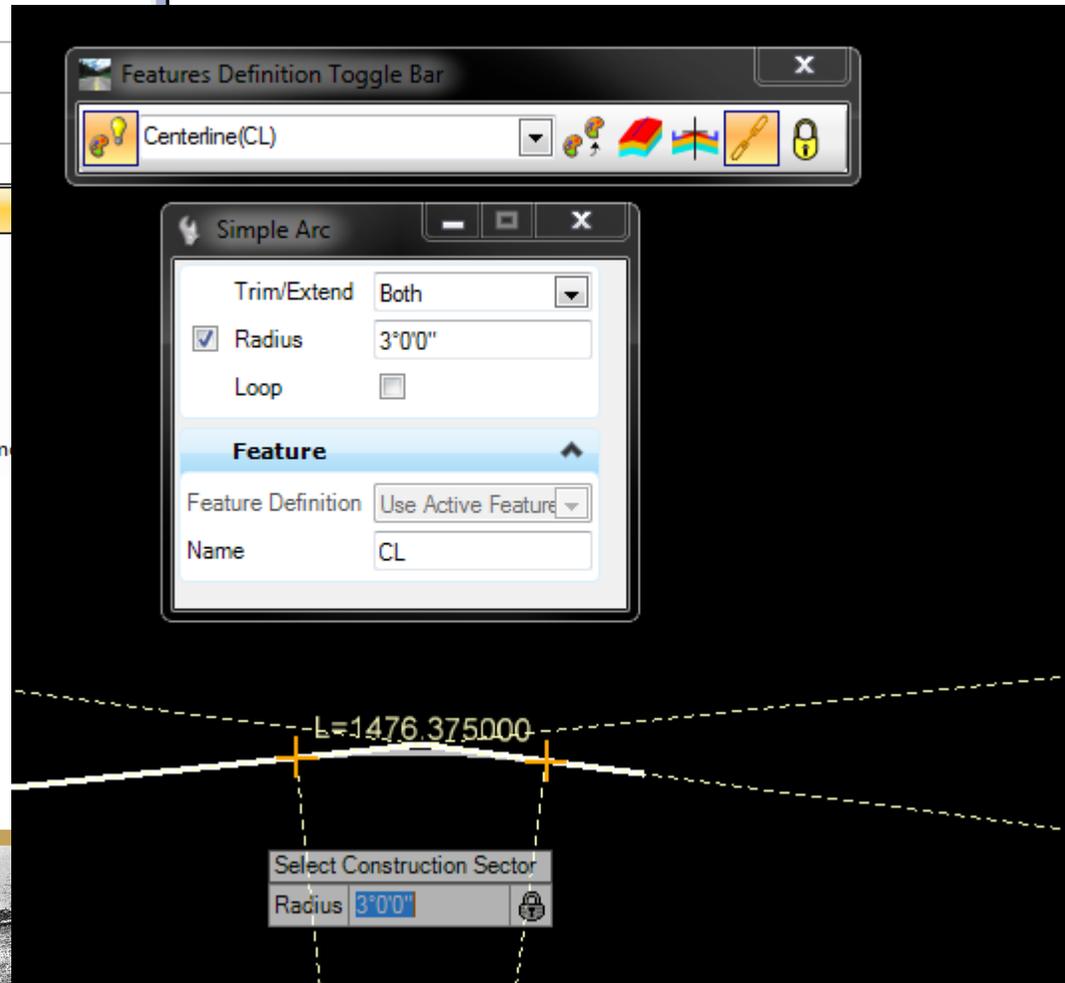
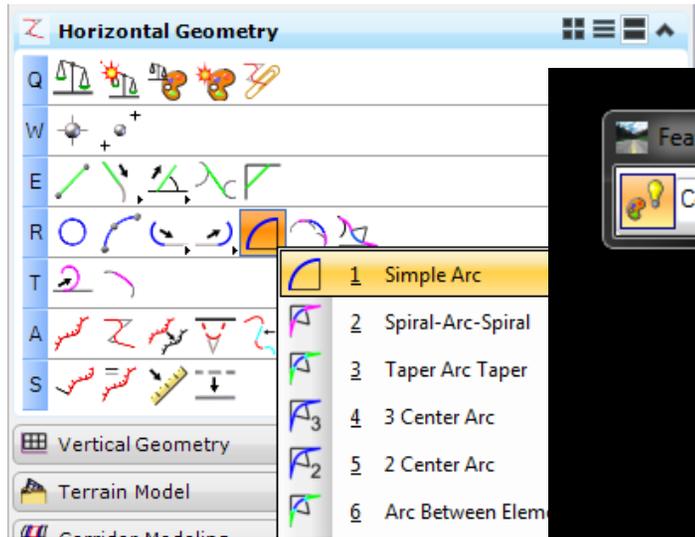


Lines; Simple, To, From



Innovative Solutions for tomorrow's transportation needs

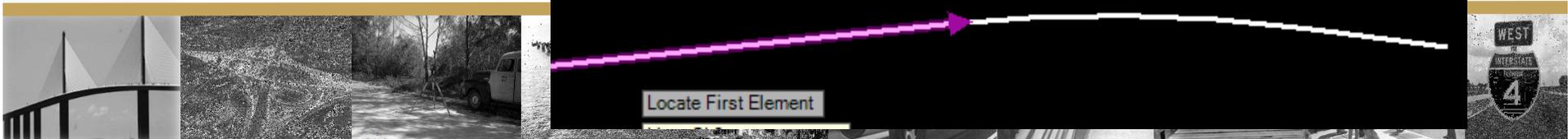
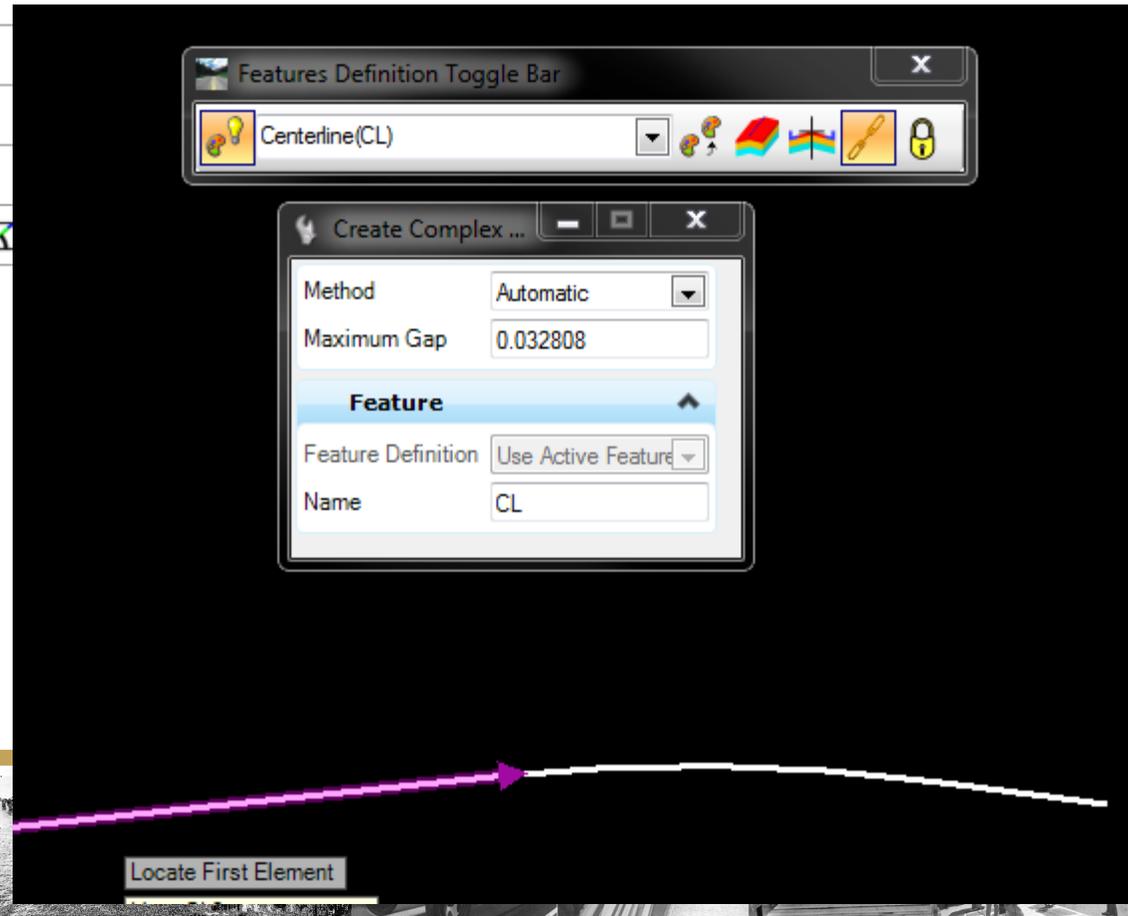
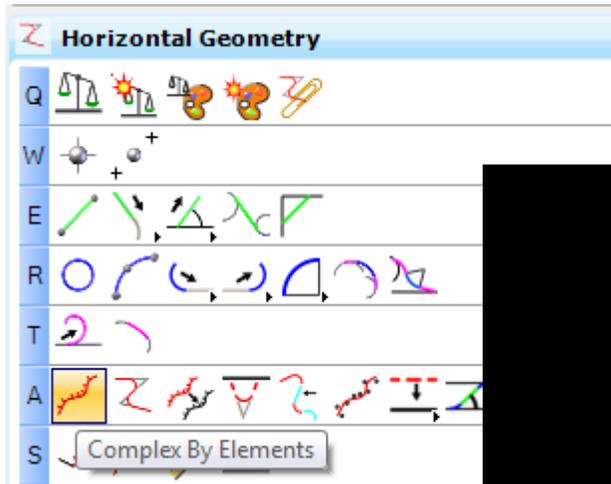
Arcs Between Elements



Innovative Solutions for tomorrow's transportation needs

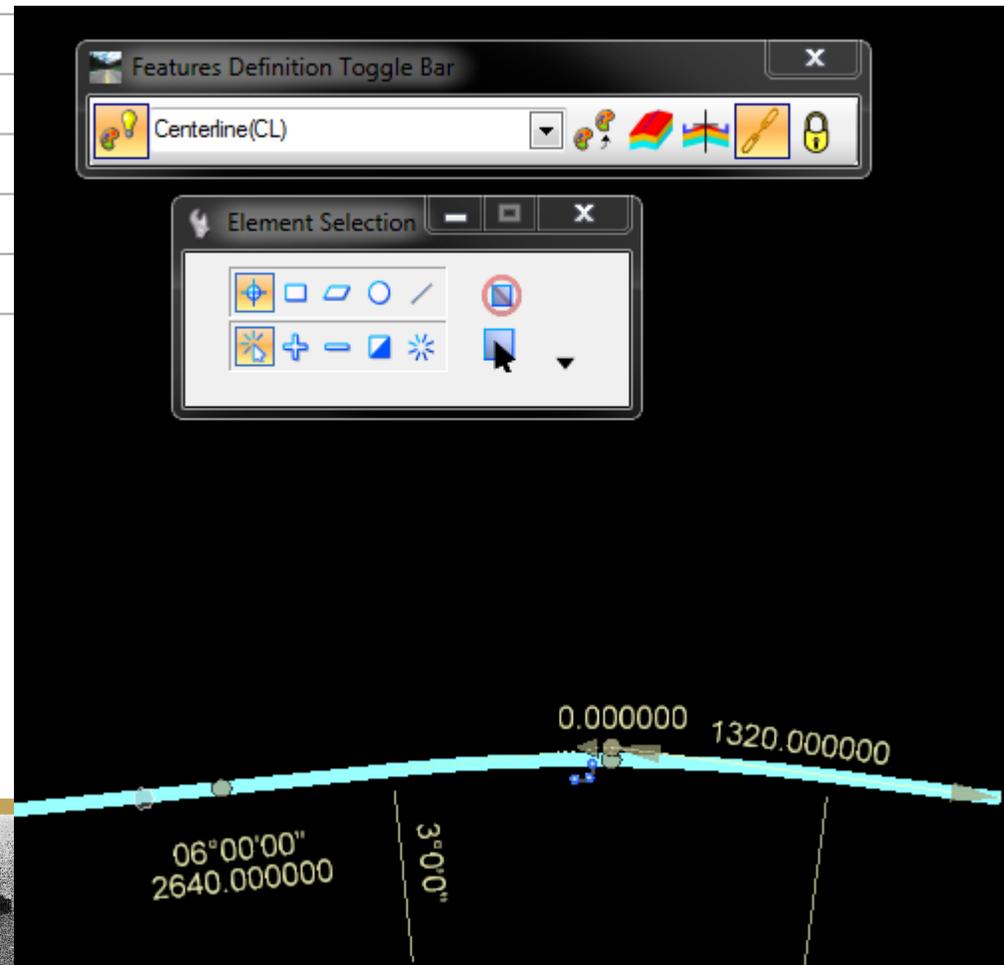
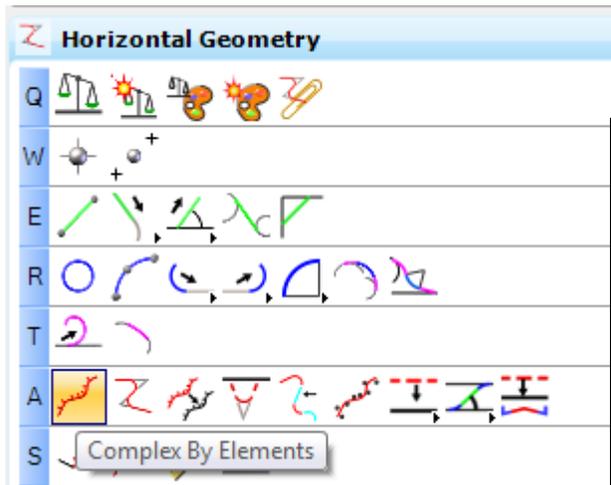


Complex by Elements



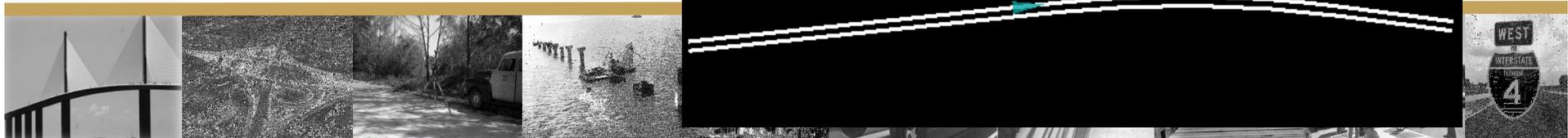
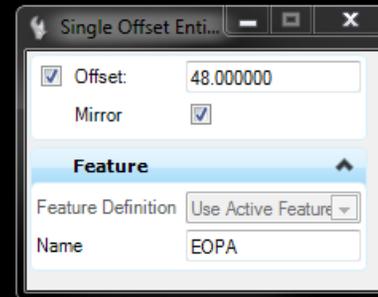
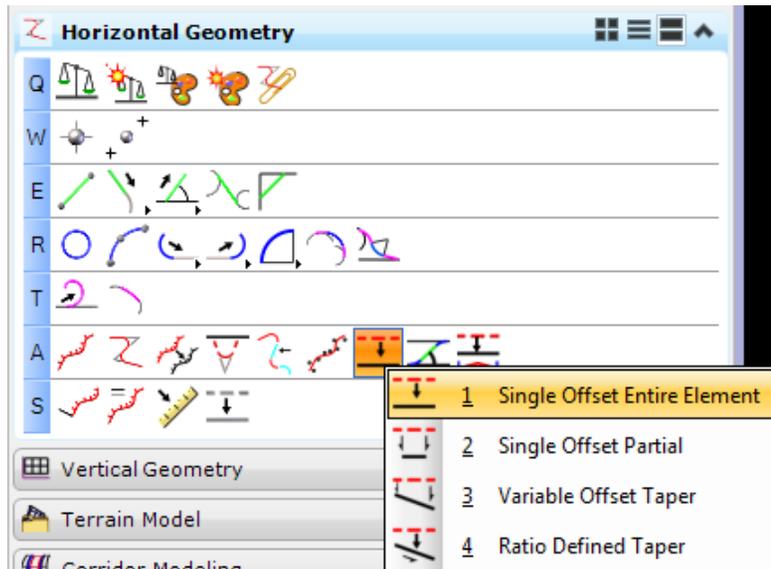
Innovative Solutions for tomorrow's transportation needs

Complex by Elements



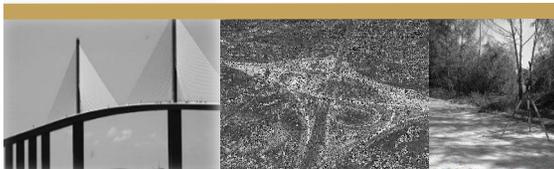
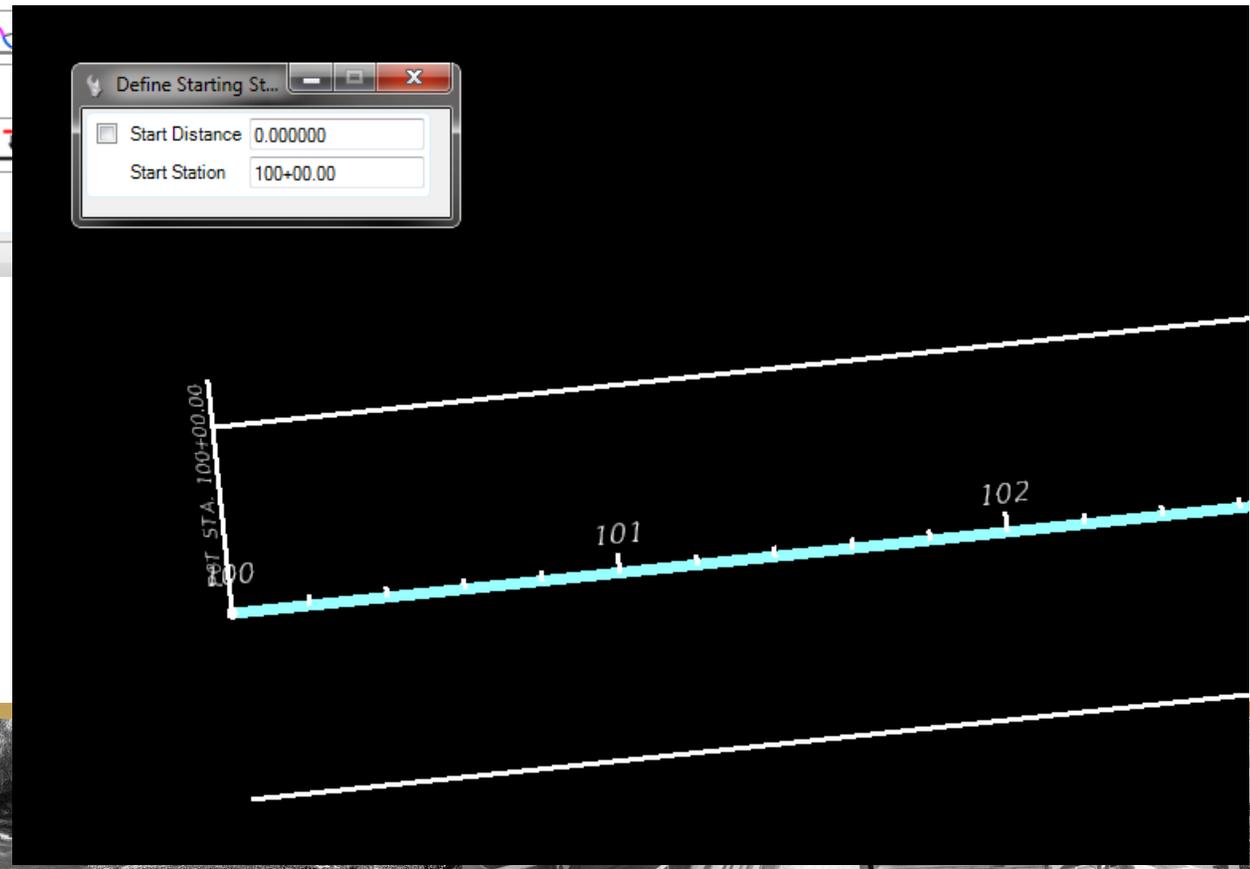
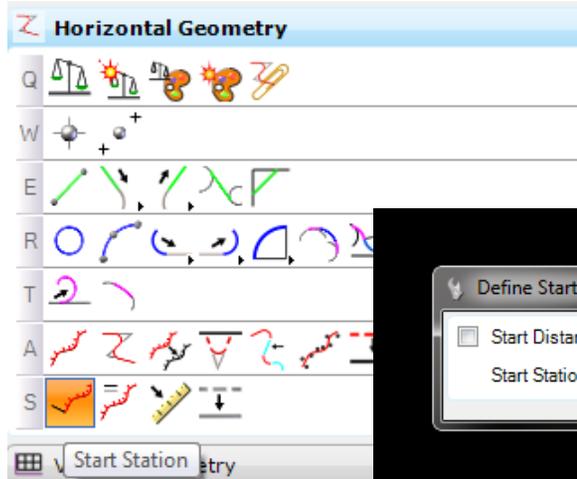
Innovative Solutions for tomorrow's transportation needs

Offsets and Tapers



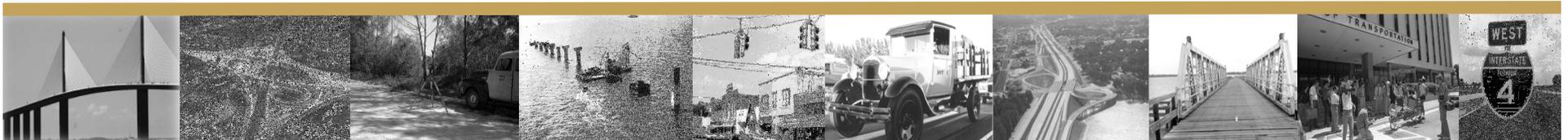
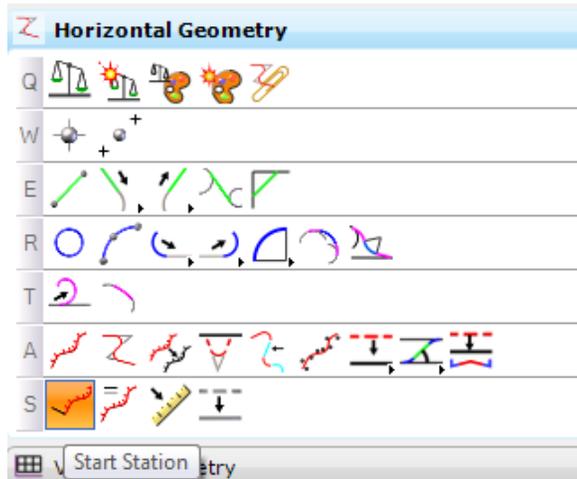
Innovative Solutions for tomorrow's transportation needs

Modify Civil Elements



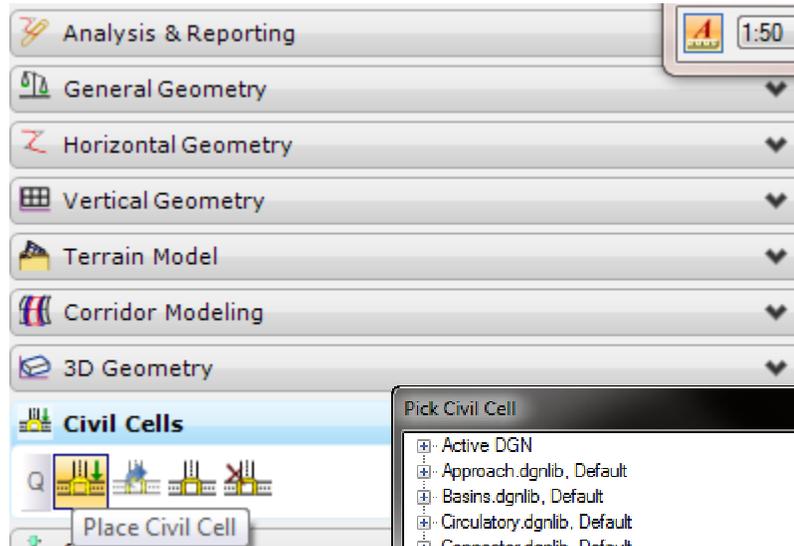
Innovative Solutions for tomorrow's transportation needs

Modify Civil Elements

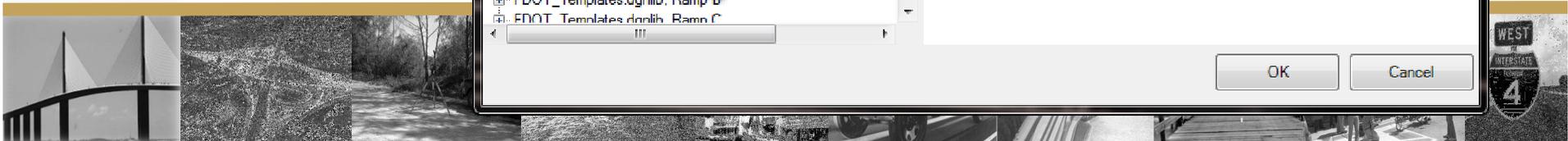
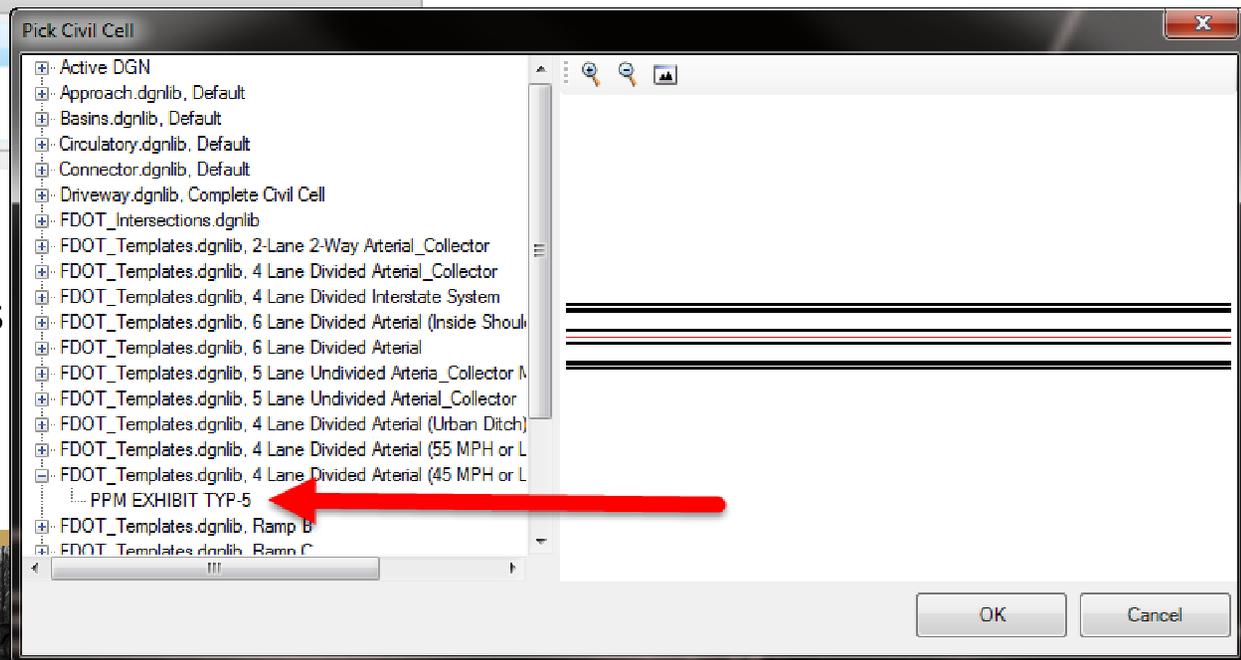


Innovative Solutions for tomorrow's transportation needs

Place Civil Cells

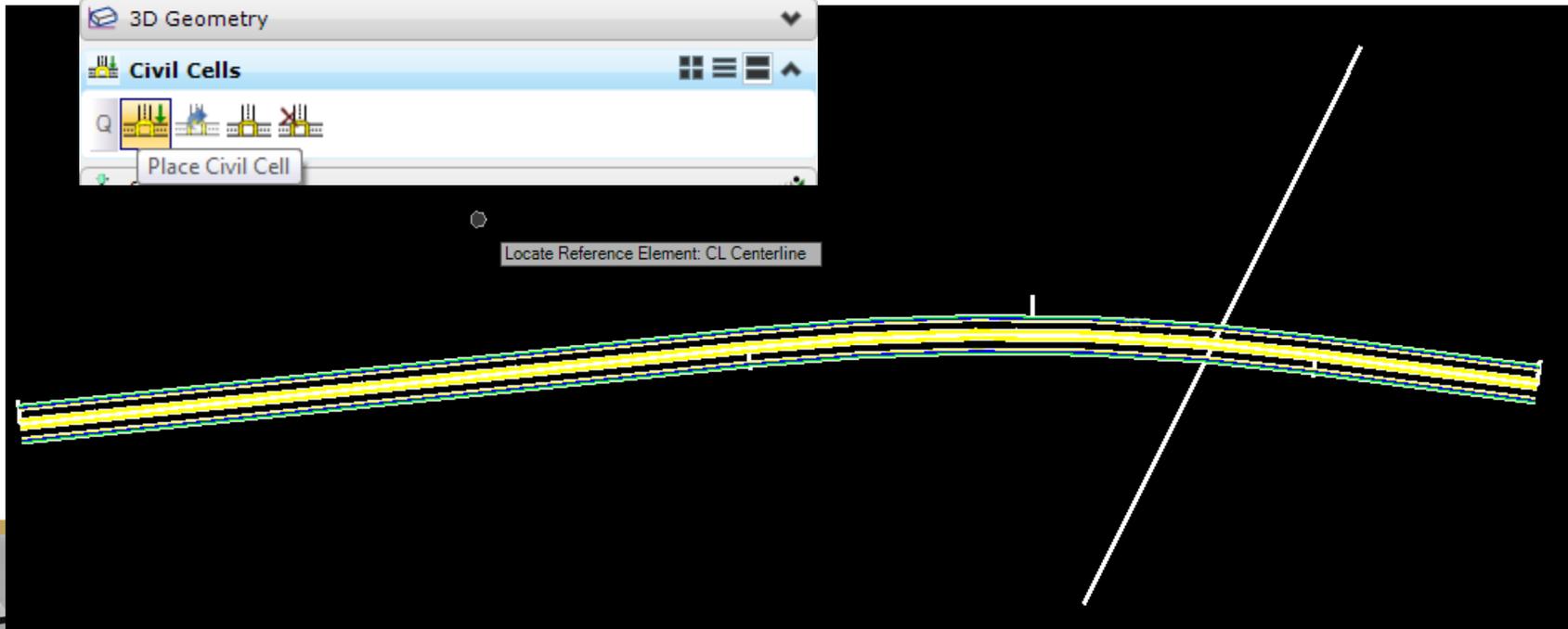
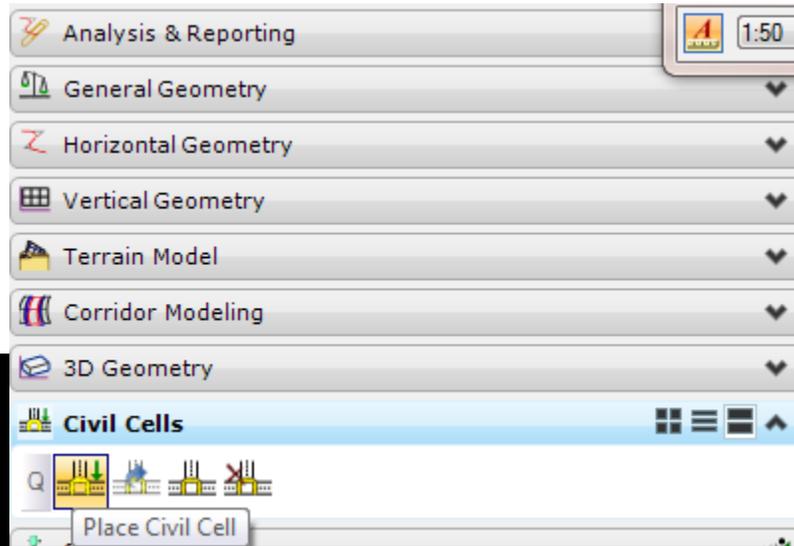


2D Template Lines



Innovative Solutions for tomorrow's transportation needs

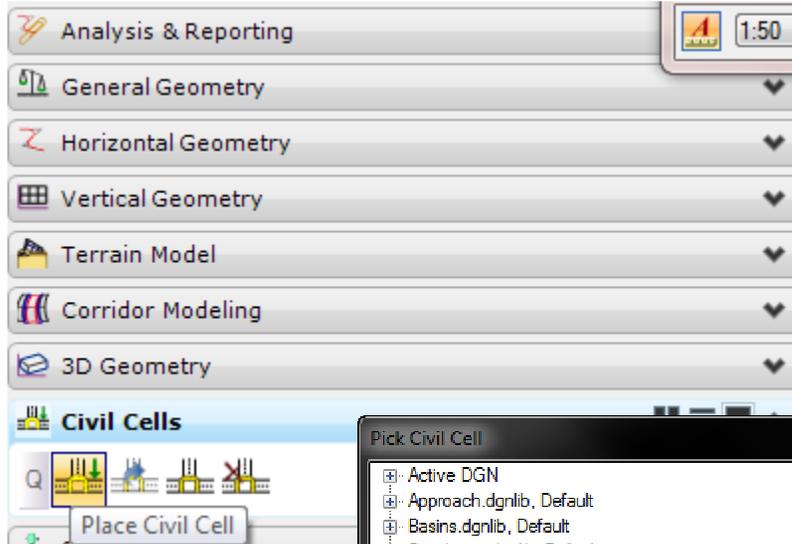
Place Civil Cells



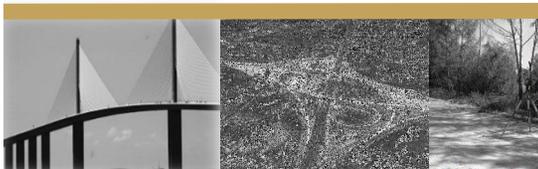
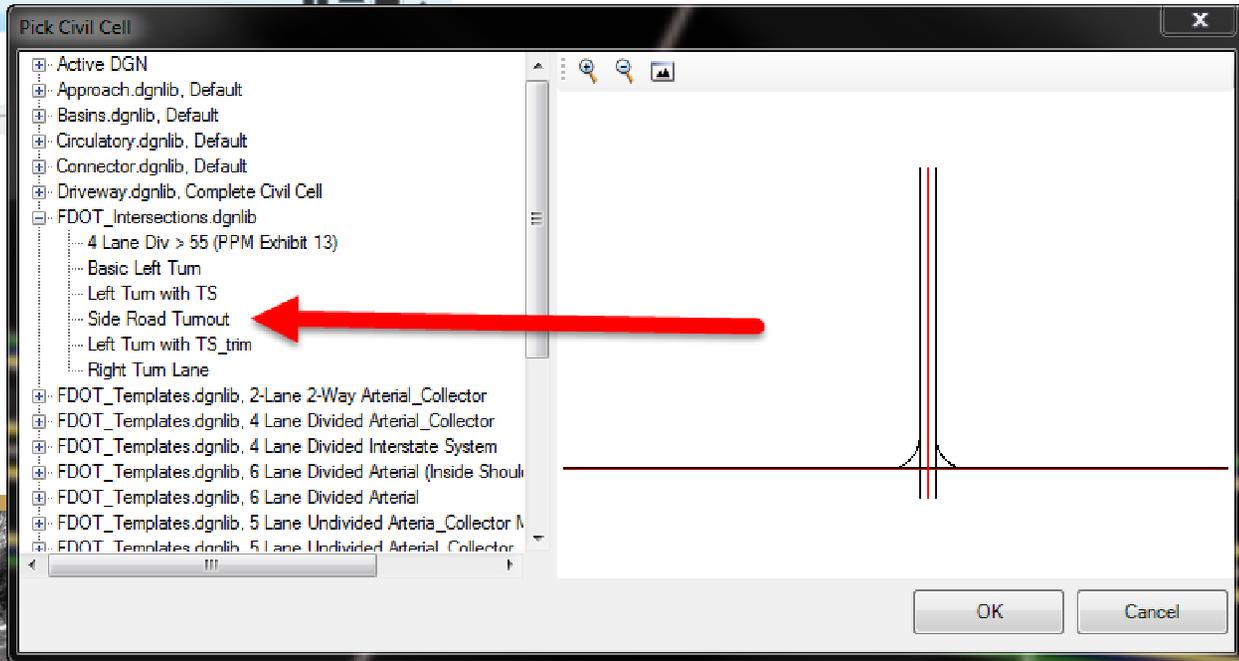
Innovative Solutions for tomorrow's transportation needs



Place Civil Cells

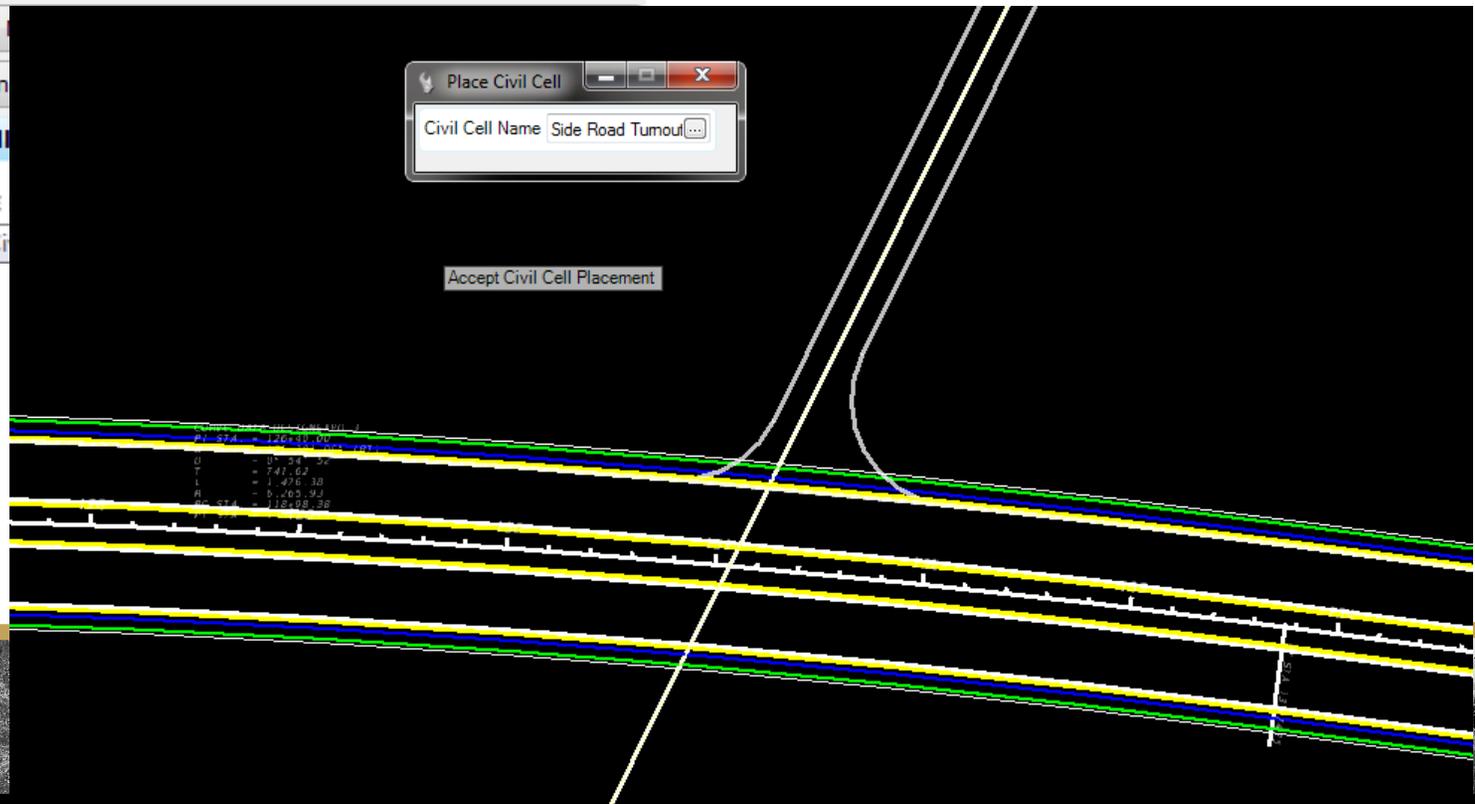
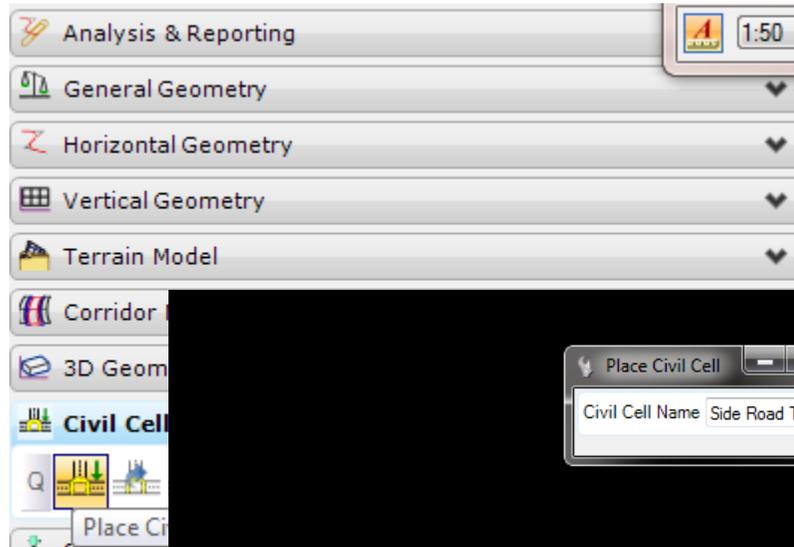


Side Road



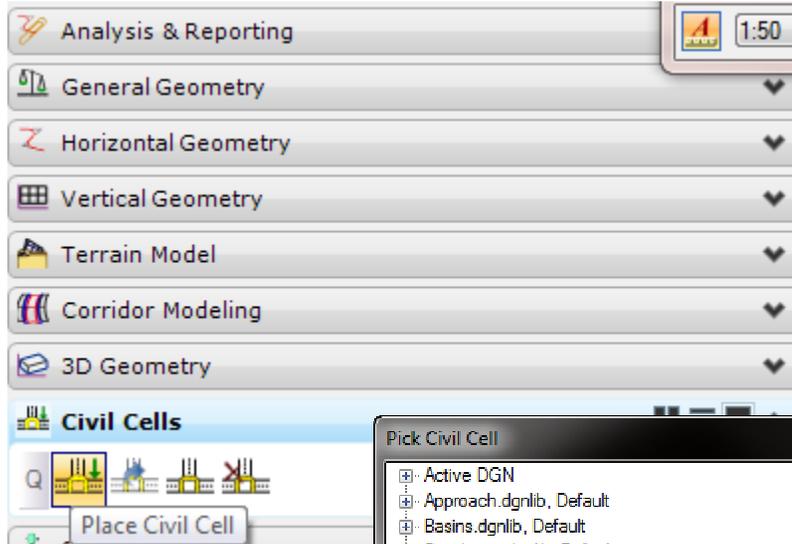
Innovative Solutions for tomorrow's transportation needs

Place Civil Cells

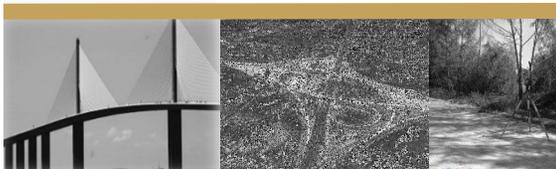
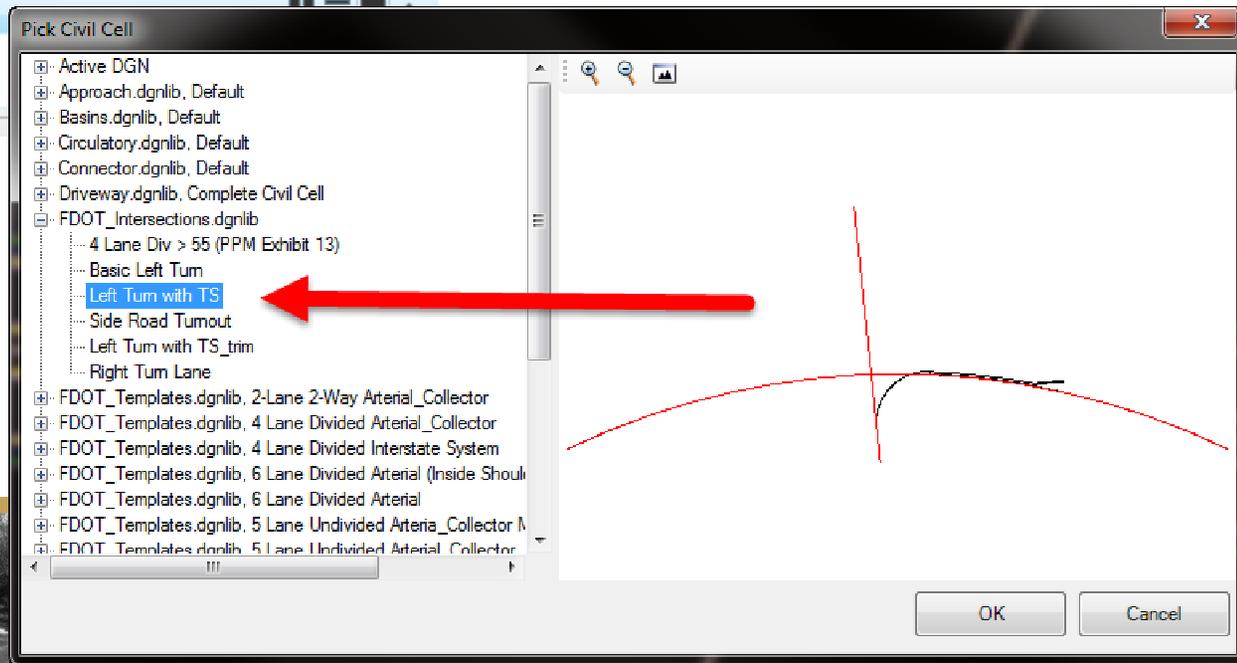


Innovative Solutions for tomorrow's transportation needs

Place Civil Cells

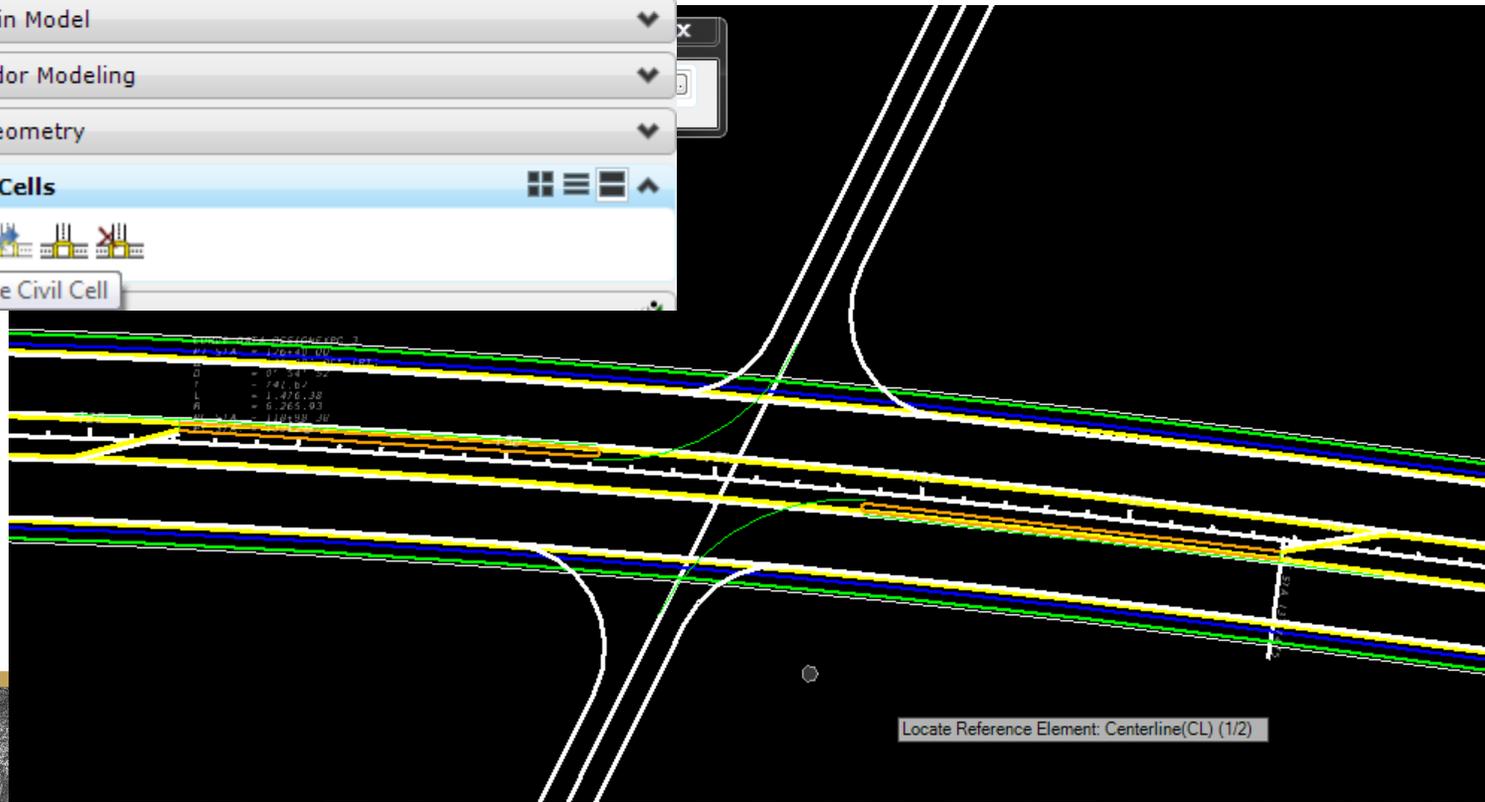
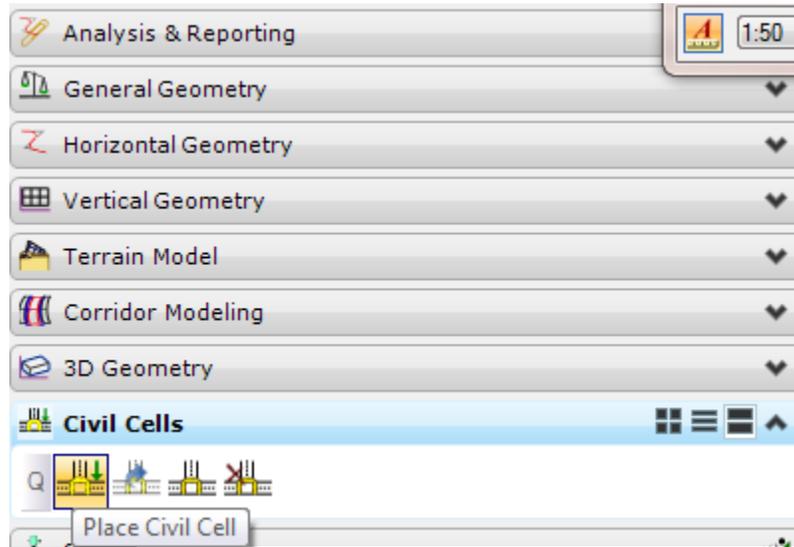


Left Turn w/ TS



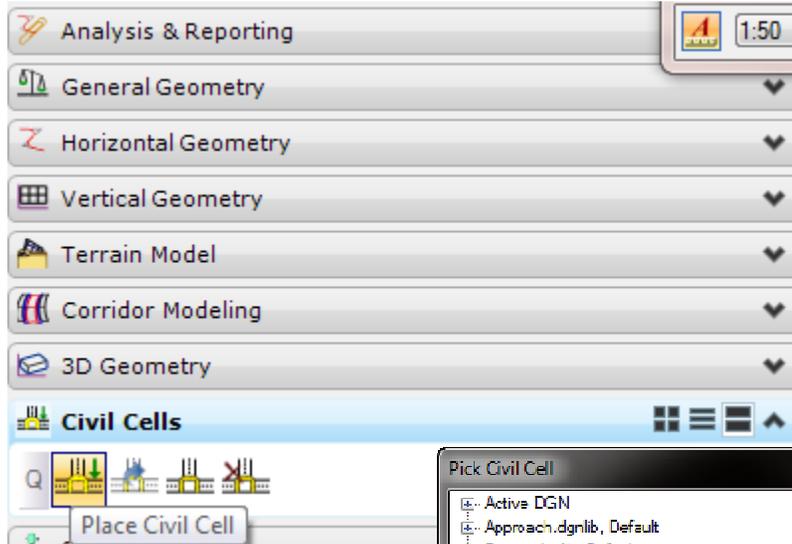
Innovative Solutions for tomorrow's transportation needs

Place Civil Cells

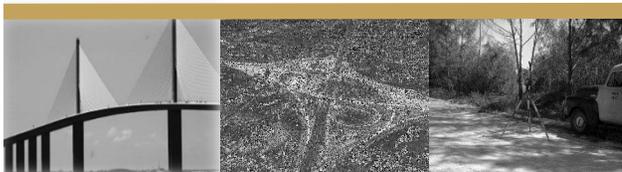
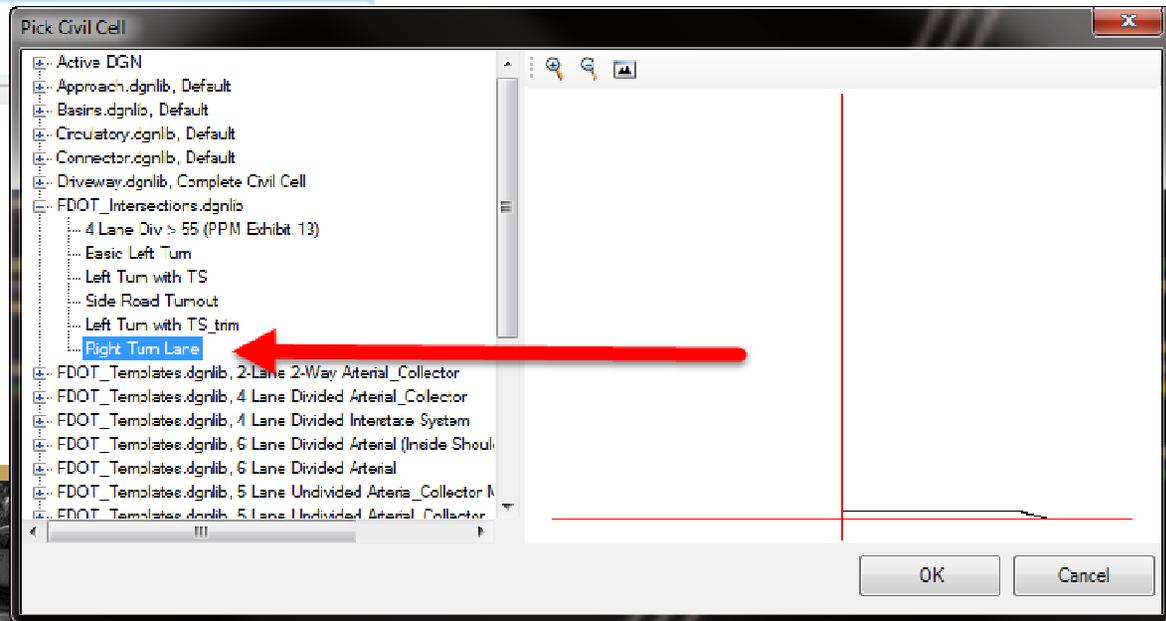


Innovative Solutions for tomorrow's transportation needs

Place Civil Cells

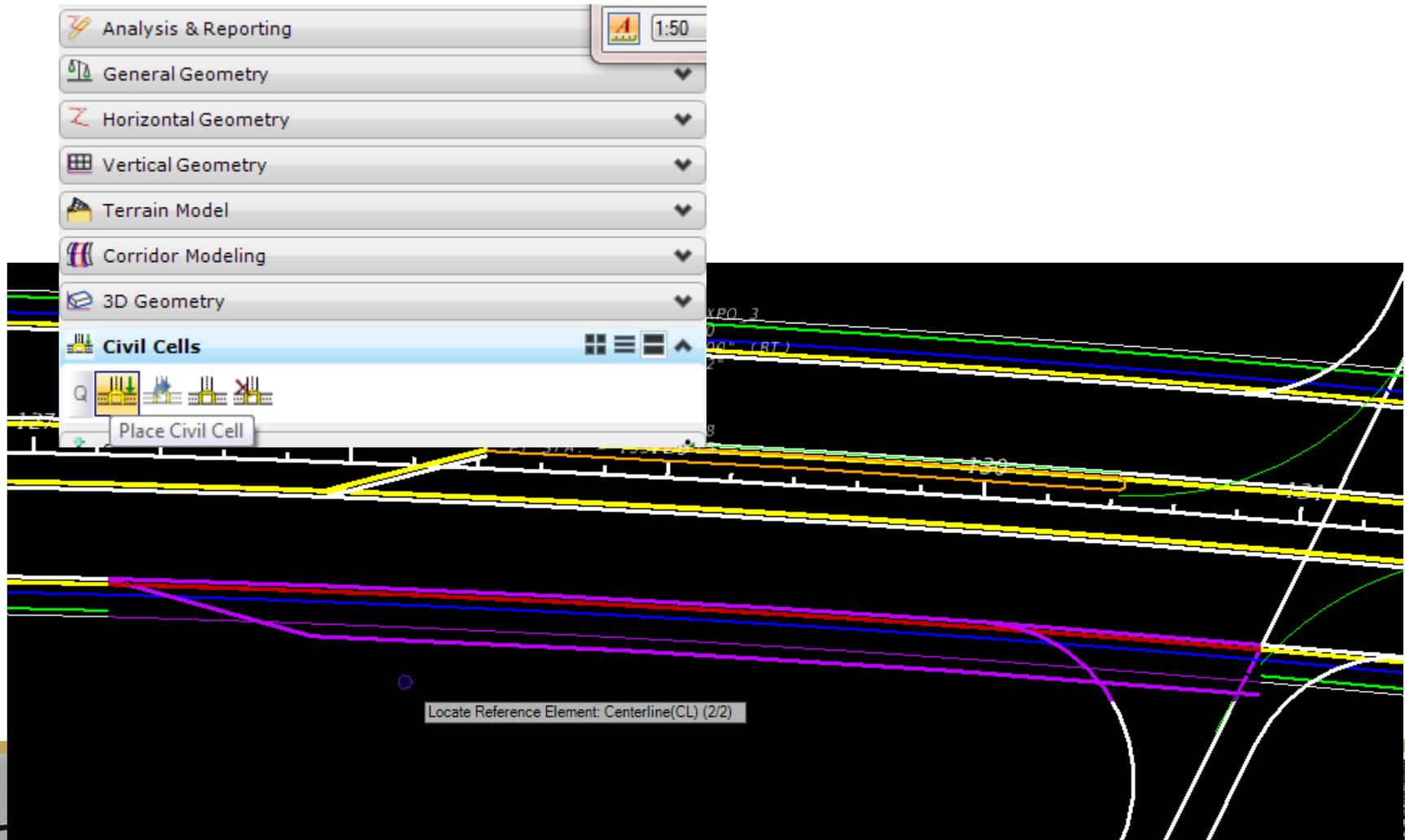


Right Turn Lane



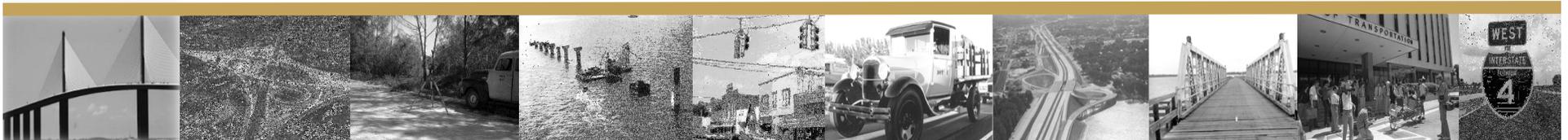
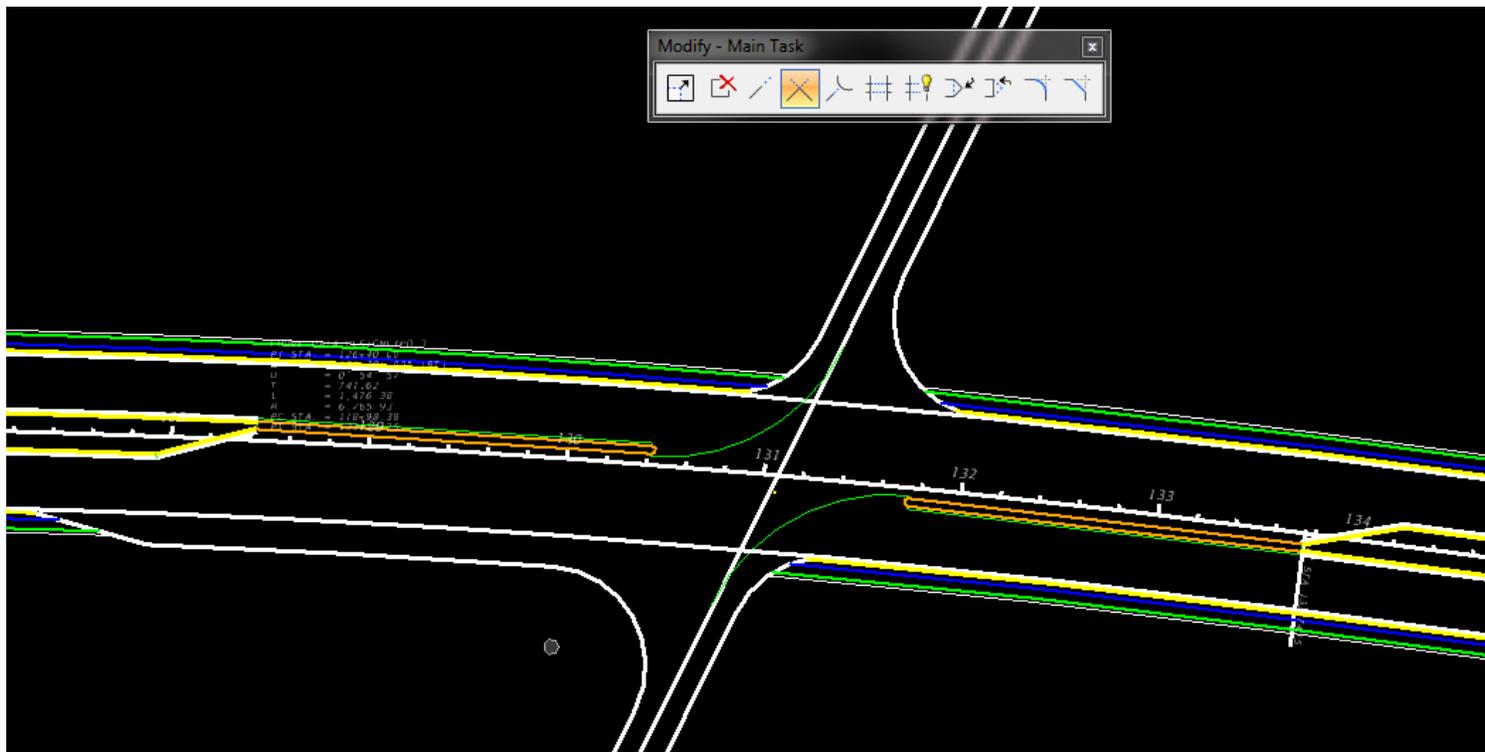
Innovative Solutions for tomorrow's transportation needs

Place Civil Cells



Innovative Solutions for tomorrow's transportation needs

Modify Civil Elements



Innovative Solutions for tomorrow's transportation needs

Horizontal Reports

Bentley Civil Report Browser C:\Users\rd964\vd\AppData\Local\Temp\RPT\40j3ztc.xml

File Tools Help

C:\ProgramData\Bentley\Civil\ReportBrowser\8.11.9\en\

- CivilGeometry
 - AlignmentsToLandXML.xls
 - HorizontalAlignmentArea.xls
 - HorizontalAlignmentCheckIntegrity.xls
 - HorizontalAlignmentControlLineDataTable.xls
 - HorizontalAlignmentCurveDataTable.xls
 - HorizontalAlignmentIntervalXYZ.xls
 - HorizontalAlignmentLength.xls
 - HorizontalAlignmentReview.xls
 - HorizontalAlignmentReviewASCII.xls
 - HorizontalAlignmentReviewWithPI.xls
 - HorizontalAlignmentStationEquations.xls
 - HorizontalAndVerticalAlignmentReview.xls
 - HorizontalElementsTable.xls
 - HorizontalElementsTableSimplified.xls
 - HorizontalElementsXYZ.xls
 - SettingOutTable.xls
 - SettingOutTableDefinition.xls
 - Traverse.xls
 - TraverseCurveASCII.xls
 - TraverseCurveASCII2.xls
 - TraverseCurveASCII3.xls
 - TraverseEditASCII.xls
 - TraversePoints.xls
 - VerticalAlignmentCheckIntegrity.xls
 - VerticalAlignmentIntervalStationElevationGrade.xls
 - VerticalAlignmentIntervalStationElevationGradeASCII.xls
 - VerticalAlignmentPointsXYZ.xls
 - VerticalAlignmentReview.xls
 - VerticalAlignmentReviewASCII.xls
 - VerticalAlignmentReviewXY.xls
- CivilSurvey
- Clearance
- ComdonModeling
- Custom
- DataCollection
- Evaluation
- Geometry
- ICS
- Images
- IntersectingAlignmentStations
- LandXML
- Legacy-RoadwayDesign
- LegalDescription
- MapCheck
- Milling
- Obsolete
- Schemas
- Sight/Visibility
- Stakeout
- StationOffset

Horizontal Alignment Review Report

Report Created: 6/4/2014
Time: 9:05am

Project: Default
Description:
File Name: C:\e\projects\22049655201\roadway\DSGNR003_883.DGN
Last Revised: 6/4/2014 09:03:14

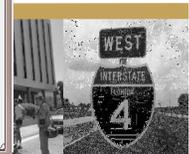
Note: All units in this report are in feet unless specified otherwise.

Alignment Name: DesignExpo
Alignment Description:
Alignment Style: CenterlineWithStationing(CLSIA)

		Station	Northing	Easting
Element: Linear				
POD	()	R 1 100+00	401954	1997365
PC	()	R 1 118+98	402153	1999253
Tangential Direction:		N 84°00'00" E		
Tangential Length:		1898		
Element: Circular				
PC	()	R 1 118+98	402153	1999253
PI	()	R 1 126+40	402230	1999991
CC	()		395921	1999908
PT	()	R 1 133+78	402134	2000726
Radius:		6266		
Delta:		13°30'00" Right		
Degree of Curvature (Arc):		3°00'00"		
Length:		1476		
Tangent:		742		
Chord:		1473		
Middle Ordinate:		43		
External:		44		
Tangent Direction:		N 84°00'00" E		
Radial Direction:		S 6°00'00" E		
Chord Direction:		S 89°15'00" E		
Radial Direction:		S 7°30'00" W		
Tangent Direction:		S 82°30'00" E		



Innovative Solutions for tomorrow's transportation needs



Contact Information

Vern Danforth, P.E.

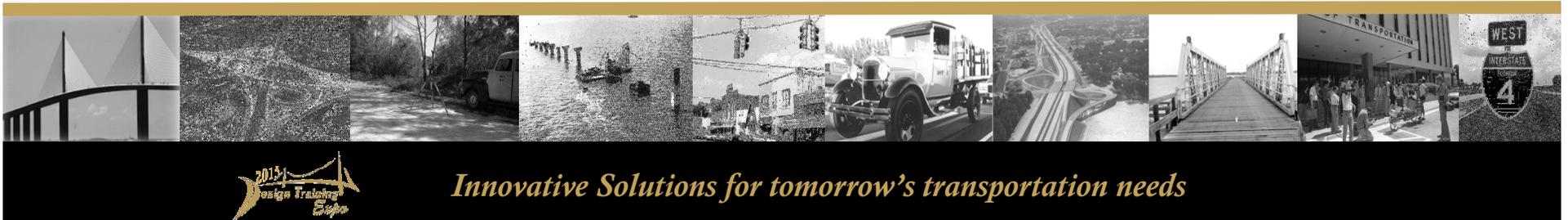
Phone no: (850) 414-4897

Toll Free no: (866) 374-3368 extension 4897

Florida Department of Transportation
Engineering / CADD Systems Office
605 Suwannee Street, Mail Station 69
Tallahassee, Florida 32399-0450

email vern.danforth@dot.state.fl.us

web: <http://www.dot.state.fl.us/ecso>



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